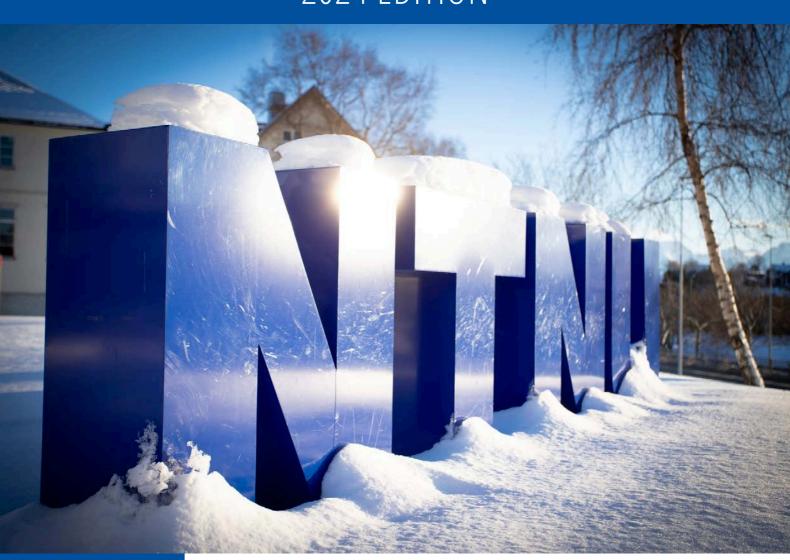
NTNU HANDBOOK OF PARTICIPATION IN EUROPEAN INITIATIVES, NETWORKS AND ALLIANCES

2024 EDITION





NTNU HANDBOOK OF PARTICIPATION IN EUROPEAN INITIATIVES, NETWORKS AND ALLIANCES

Introduction

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1.What is the purpose?

The NTNU Handbook of European participation aims to provide a quick overview of relevant initiatives at the European level (Alliances, Strategic Initiatives, etc., where NTNU is already a member or membership would fit the long-term strategy of NTNU.

The Handbook is intended to be a tool for providing referential NTNU entry points to researchers willing to explore European Research Area collaborations in their specific field of interest.

Networks, positioning, and relevant actors in a specific field can be identified and approached in a direct way, and engagement in relevant initiatives can be discussed with the researcher(s) representing NTNU in a specific initiative of interest.

2. What type of information is here?

Each Alliance/Initiative/etc. has a short description about what it is, who the NTNU contact person is, who the administrative contact person is and a link to its web page. When it is relevant, it is also stated which strategic research area (TSO) 1 that is related to it. In the context of this Handbook, the task of the administrative contact person is to stay up to date on changes related to NTNU contact persons and memberships status.

The European Partnerships have been moved into their own document, including a guide on developing initiatives at the NTNU level. This is available on https://www.ntnu.edu/brussels

We hope that this Handbook inspires you to get involved in one of the European platforms, alliances, or initiatives. This also extends to all the European possibilities that are currently not listed in the document.

Please send corrections and updates to:

-NTNU Brussels Office: trainee@brussels-offcie.ntnu.edu

-Thomas Aarnseth: thomas.aarnseth@ntnu.no



3. Structure of the document

The collaborative networks are divided into 5 categories. The list below is numbered the same as the chapters. Input on categorization for future versions is welcome.

- 2. Alliances and Working Groups. NTNU is a member of (at least) 16 University, Research, and Education alliances with a specific European focus. The criteria for listing is NTNU institutional membership. Four of the alliances (CESAER, EERA, ERCIM, N5T) receive extra attention, either at the central level or at a faculty level. NTNU staff members are members of several working groups and coordinate their efforts.
 - 2. ERIC and ESFRI represent two levels of maturity of European Research Infrastructures. NTNU is currently a member of or affiliated with seven European research infrastructures that are either ERIC or ESFRI.
 - 3. In addition to the Joint Programming Initiatives, related Strategic Initiatives under Horizon Europe, such as the New European Bauhaus, have been launched. The overall aim of the Joint Programming process and the Strategic Initiatives is to focus research on several key areas for Europe.
- 4. European Technology Platforms (ETPs) develop research and innovation agendas and roadmaps. They conduct their activities transparently and are open to new members. ETPs are among the most influential entities in shaping European R&I agendas. The number of ETPs has been reduced after a consolidation process, resulting in the new European Partnerships. See the document for a list of NTNU's involvement in the European Partnerships.
 - 5. In addition, a set of relevant and influential networks have been included in the document. These are listed as «Additional international collaborations» in chapter 5.

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1. ALLIANCES AND WORKING GROUPS

1.1 Athens - Athens Network



NTNU Contact Person: Wolfgang Laschet

URL: http://www.athensnetwork.eu/

Administrative unit: International Relations

Short description:

Created in 1997, the ATHENS Network (Advanced Technology Higher Education Network / SOCRATES) is made up of 14 European technological universities and nine ParisTech Graduate Schools of Engineering, which coordinates the programme.

The principal goal of the Network is to facilitate the exchange of students, teachers and researchers from major European technological universities and to participate together under European technological development and training programmes.

One of the Network's first and most particular actions concerns the organisation of an intensive programme of coursework taught at each member institution during one or two sessions in November and March. This activity is called the ATHENS week.

CESAER- Conference of 1.2 European Schools for Advanced CESAER **Engineering Education and** Research



NTNU Contact Person: Oddrun Maaø

URL: http://www.cesaer.org

Administrative unit: Research, Innovation and External

Relations Division

Short description:

CESAER is the European association of doctorate-granting specialised and comprehensive universities of science and technology that champion excellence in higher education, training, research and innovation, influence debate, contribute to the realisation of open knowledge societies and deliver significant scientific, economic, social, and societal impact.

CESAER Working groups:

General Assembly – Institutional Liaison	<u>Oddrun Maaø</u>
Task Force Research and Innovation Infrastructures	N/A
Task Force Innovation	Toril Hernes (Co-Chair)
General Assembly	<u>Marit Reitan</u>
Board of Directors	<u>Toril Hernes</u>

1.2 CESAER- Conference of European Schools for Advanced CESAER Engineering Education and Research

Task Force Competitive Funding	<u>Massimo Busuoli</u> <u>Nina Sindre</u>
Task Force Benchmarking	N/A
Task Force Ethics and Values	N/A
Task Force Open Science WG RDM	<u>Ingrid Heggland</u>
Task Force Mobility	N/A
Task Force Impact & Outreach	N/A
Task Force on Costs of STEAM Education	N/A

1.3 EARMA- European Association of Research Managers and Administrators



NTNU Contact Person: Patrick Reurink

URL: Research, Innovation and External Relations Division

Administrative unit: Research, Innovation and External Relations Division EARMA Professional Development and Recognition Committee: Astrid Vigtil

<u>EARMA Annual Conference Program Committee</u>: <u>Massimo</u> <u>Busuoli</u>

Short description:

EARMA represents the community of Research Managers and Administrators (RM&As) in Europe. Our members work in industry, academia, the public and private sectors. We work with the EU Commission, national and international funding agencies. EARMA provides a networking forum, a learning platform, and a place to share experiences and best practice among RM&As throughout EARMA and in the wider RM&A community.

EARMA is an active member of the wider international RM&A community and is a founding member of the International Network of Research Management Societies (INORMS).

Our members work at the forefront of building the European Research Area. We form the interface between research funding organisations and the scientific community, bridging cultural and legal differences between countries, and between academia and industry, contributing to policy consultations, and managing the smooth running of research projects.

EASSH - European Alliance of Social Science and Humanities



NTNU Contact Person: Jesper Aagaard Petersen

URL: http://www.eassh.eu/

Administrative Contact Person: Bård Li

Administrative unit: Faculty of Social and Educational

Sciences (SU)

Short description:

The "European Alliance for the Social Sciences and Humanities" promotes the importance and value of the social sciences and humanities (SSH) at all pertinent levels and through all relevant actions in Europe and beyond.

The aims are:

- to promote European social sciences and humanities as a resource for Europe and the world;
- to provide a contact point for national, European and international SSH organisations, and pertinent policy- and decision-makers;
- to provide a forum for the discussion of matters of common interest;
- to further the interests of its members with respect to the institutions of the European Union and other European and international bodies in all fields relevant to SSH;
- to promote ethically justified and responsible SSH research at all levels;
- to ensure that proper attention is paid to SSH at all levels of education.

1.5 ECSO - European Cyber Security Organisation



NTNU Contact Person: Nils Kalstad

URL: https://www.ecs-org.eu/

Administrative Contact Person: Jo-Are Eriksen

Administrative unit: Faculty of Informatics and Electronics (IE), Department of

Information Security and Communication Technology (IIK)

Short description:

NTNU is together with SINTEF and SIMULA member of a Norwegian ECSO shadow organisation.

The European Cyber Security Organisation (ECSO) ASBL is a fully self-financed non-for-profit organisation under the Belgian law, established in June 2016.

ECSO represents the industry-led contractual counterpart to the European Commission for the implementation of the Cyber Security contractual Public-Private Partnership (cPPP). ECSO members include a wide variety of stakeholders such as large companies, SMEs and Start-ups, research centres, universities, end-users, operators, clusters and association as well as European Member State's local, regional and national administrations, countries part of the European Economic Area (EEA) and the European Free Trade Association (EFTA) and H2020 associated countries.

The main objective of ECSO is to support all types of initiatives or projects that aim to develop, promote, encourage European cybersecurity, and in particular to:

Foster and protect from cyber threats the growth of the European Digital Single Market;

Develop the cybersecurity market in Europe and the growth of a competitive cybersecurity and ICT industry, with an increased market position;

Develop and implement cybersecurity solutions for the critical steps of trusted supply chains, in sectoral applications where Europe is a leader.

ECSO is engaged in taking concrete actions to achieve these objectives by:

1.5 ECSO - European Cyber Security Organisation



Collaborate with the European Commission and national public administrations to promote Research and Innovation (R&I) in cybersecurity;

Propose a Strategic Research and Innovation Agenda (SRIA) and a Multiannual Roadmap with its regular updates;

Foster market development and investments in demonstration projects and pilots to facilitate bringing innovation to cybersecurity market;

Foster competitiveness and growth of the cybersecurity industry in Europe (large companies and SME) as well as end users / operators through innovative cybersecurity technologies, applications, services, solutions;

Support the widest and best market uptake of innovative cybersecurity technologies and services for professional and private use;

Promote and assist in the definition and implementation of a European cybersecurity industrial policy to encourage the use of cybersecurity solutions as well as secure and trustworthy ICT solutions to increase digital autonomy;

Support the development and the interests of the entire cybersecurity and ICT security ecosystem (including education, training awareness, etc.);

Areas of interest

- ICT Infrastructure (including cloud, mobile, networks, etc.)
- Smart Grids (Energy)
- Transportation (including Automotive / Electrical Vehicles)
- Smart Buildings and Smart Cities
- Industrial Control Systems (Industry 4.0)
- Public Administration and Open Government
- Healthcare
- Finance and Insurance

1.6 EERA - European Energy Research Alliance



NTNU Contact Persons: Massimo Busuoli and Asgeir Tomasgard

URL: https://www.eera-set.eu/

Administrative Contact Person: TBC

Administrative unit: **Energy**

Short description:

The European Energy Research Alliance (EERA) is an alliance of European public research centres and universities. It is one of the cornerstones of the European Strategic Energy Technology Plan (SET-Plan).

EERA brings together more than 170 research centres and universities. Actively working together on 17 joint research programmes, they build on national research initiatives. In a Joint Programme a research organisation joins institutions in other European countries to work on shared priorities and research projects. The EERA Joint Programmes are aligned with the priorities for low carbon technologies defined in the SET-Plan.

EERA Working Groups:

<u>Bioenergy</u>	Edd Anders Blekkan
Bioenergy Subprogramme 5 (Sustainability, Techno-Economic Analysis, Public Acceptance)	<u>Raquel Santos Jorge</u>
<u>Carbon Capture Storage</u> (CCS)	<u>Liyuan Deng</u>
Economic, Environmental and Social Impacts of Energy Policies and Technologies (E3S)	<u>Asgeir Tomasgard</u>
Energy Efficiency in Industrial Processes	<u>Armin Hafner</u>
<u>Energy Storage</u>	<u>Pål-Tore Selbo</u>

1.6 EERA - European Energy Research Alliance



Energy Systems Integration	<u>Magnus Korpås</u>
<u>Fuel Cells and Hydrogen</u>	<u>Svein Sunde</u>
<u>Hydropower</u>	Ole Gunnar Dahlhaug
<u>Ocean Energy</u>	<u>Ingrid Schjølberg</u>
Photovoltaic Solar Energy	<u>Marisa Di Sabatino</u>
Smart Cities	Annemie Wyckmans
Smart Grids	<u>Irina Oleinikova</u>
Wind Energy	<u>Michael Muskulus</u>

1 T ELCA - European Lightweight Clusters Alliance



NTNU Contact Person: Sotirios Grammatikos

URL: https://elcanetwork.eu/

Administrative Contact Person: Miriam Khider Administrative unit: Faculty of Engineering (IV)

Short description:

ELCA (European Lightweight Cluster Alliance) is a collaborative initiative that aims to accelerate the adoption of lightweight materials in strategic industries. Road transport is the initial target, but other lightweight-related industrial markets will be targeted as well. The alliance will establish a unique inclusive business framework which enable the main players from established industries and research institutions to explore lightweight-driven market opportunities collaboratively, and facilitate activities to put the lightweight technologies into practice. By accelerating mass adoption of lightweight advanced materials, we can contribute to a sustainable, less-polluted society.

1.8 ENHANCE



NTNU Contact Person: Oddrun Walstad Maaø

URL: https://enhanceuniversity.eu/
Board of Directors: Tor Grande

Steering committee member: Toril Hernes

Short description:

ENHANCE Alliance was founded in 2020 by seven major research-intensive universities focusing on science and technology, laying the foundations for an innovative European University of Technology. In November 2022, three more European universities joined the ENHANCE Alliance, bringing the total number of member universities to ten. The ENHANCE Alliance aims to empower students, researchers and society to address the challenges of tomorrow responsibly, challenges set out in the Green Deal and Digital Transformation. The partner institutions have a history of solid cooperation in EU programmes and joint research projects.

The Alliance is based on mutual support in driving necessary innovation for the member institutions and ENHANCE itself. Students will be enabled to reflect on European values such as diversity, democracy, and equality and develop critical thinking. ENHANCE strives to create responsible European identities by integrating the joint European culture and political system into subject modules.

Together, they will contribute to solutions for challenges such as digitalisation and AI, climate action and sustainable cities and communities, creating impact through a sustainable entrepreneurship ecosystem.

ENHANCE will ensure that education and research have a social, economic and environmental impact, but it will also form a joint European sphere of knowledge, underpinning sustainable development, adhering to the highest standards of good practice in teaching and research, inclusivity and diversity.

1.9 EUA - European University Association



NTNU Contact Person: Nina Sindre

URL: https://www.eua.eu/

Short description:

Who we are

The European University Association (EUA) represents more than 800 universities and national rectors' conferences in 48 European countries. EUA plays a crucial role in the Bologna Process and in influencing EU policies on higher education, research and innovation. Through continuous interaction with a range of other European and international organisations, EUA ensures that the independent voice of European universities is heard.

What we do

EUA provides unrivalled opportunities for members to share best practices by participating in projects, events and other mutual-learning activities involving a wide range of universities. The Association also provides members with unique opportunities to shape European policies and initiatives affecting higher education and research.

1.10 Eurecom



NTNU Contact Person: <u>Katina Kralevska</u> URL: <u>http://www.eurecom.fr/en/partners</u>

Administrative Contact Person:

Administrative unit: Faculty of Information Technology and Electrical Engineering (IE), Department of Information Security and Communication

Technology (IIK)

Short description:

EURECOM is a Graduate school and Research Centre in digital sciences located in the Sophia Antipolis technology park (French Riviera), a major European place for telecommunications activities.

It was founded in 1991 in a consortium form [GIE] that allowed EURECOM to build a large network of renowned academic and industrial partners. The "Institut Mines Telecom" is a founding member of EURECOM consortium. EURECOM research teams are made up of international experts, recruited at the highest level, whose work is regularly honoured and has earned international recognition.

Current members of EURECOM consortium:

Orange, BMW Group Research & Technology, Symantec, Monaco Telecom, SAP, IABG.

Institut Mines-Telecom, Aalto University (Helsinki), Chalmers University of Technology, Politecnico di Torino, Technische Universität München (TUM), Norwegian University of Science and Technology (NTNU), Czech Technical University (CTU) in Prague.

Principality of Monaco

1 1 1 EuroHealthNet



NTNU Contact Person: <u>Bård Li</u> URL: <u>https://eurohealthnet.eu/</u>

Administrative unit: Faculty of Social and Educational Sciences (SU)

Short description:

Based in the heart of Brussels' European quarter, EuroHealthNet brings together partners operating at EU, national, regional, and local levels. This partnership model strengthens the voice of and approaches to health promotion and prevention in the EU, and stimulates action at all levels of government.

The office monitors, influences, analyses, and explains EU policy and action related to health inequalities and determinants. The expertise and experience of the partners is amplified and shared, helping to influence change at European, National, and sub-national levels.

EuroHealthNet also has an important role in facilitating information exchange between partners through study visits, capacity building actions and technical working groups. This helps them to build capacity and knowledge, so they can build on the best that Europe has to offer in the field of public health and health promotion.

STRUCTURE

EuroHealthNet seeks to find links and synergies between fields of expertise and sectors, and to stimulate interaction between policy makers, researchers and practitioners.

Many EuroHealthNet activities take place across three platforms covering policy, practice, and research. Close interaction between the platforms, and unification through a core team and activities, ensures that each field builds on the work of the others, and that actions are aligned.

1.12 European Clean Hydrogen Alliance



NTNU Contact Person: Bruno Pollet

URL: https://www.ech2a.eu/

Administrative Contact Person: Miriam Khider Administrative unit: Faculty of Engineering (IV)

Short description:

The European Clean Hydrogen Alliance (ECH2A) was announced as part of the New Industrial Strategy for Europe and it was launched on 8 July 2020 in the context of the hydrogen strategy for a climate-neutral Europe.

The European Clean Hydrogen Alliance aims at an ambitious deployment of hydrogen technologies by 2030, bringing together renewable and low-carbon hydrogen production, demand in industry, mobility and other sectors, and hydrogen transmission and distribution. With the alliance, the EU wants to build its global leadership in this domain, to support the EU's commitment to reach carbon neutrality by 2050.

The objectives of the European Green Deal and Europe's clean energy transition require a deep transformation of the production, storage and consumption of energy, with carbon-free power generation, increased energy efficiency, and the deep decarbonisation of transport, buildings and industry. Hydrogen is a key priority to achieve these goals. It is the missing link in the puzzle to a fully decarbonised economy by 2050.

Hydrogen can support the transition towards an energy system relying on renewable energy by balancing variable renewable energy. It offers a solution to decarbonise heavily-emitting industry and transport sectors relying on fossil fuels, where conversion to electricity is not an option.

At the same time hydrogen opens up business opportunities for the European industry to steer the transition towards a carbon neutral future, based on EU leadership in a number of key clean hydrogen manufacturing related technologies. The emergence of a hydrogen value chain is expected to bring also major benefits in terms of jobs and European energy mix.

1.12 European Clean Hydrogen Alliance



In order to launch the scale up of hydrogen production, distribution and use, the European Hydrogen Strategy sets a strategic approach to install at least 6 GW by 2024 and 40 GW of renewable hydrogen electrolysers by 2030, adapt infrastructure needs and boost demand in end-use sectors.

However, full-scale industrial deployment requires systemic action along the whole value chain, from hydrogen production and transport to the industrial use as feedstock for energy-intensive industries or as fuel for transport or balancing the renewable electricity output. That is where the European Clean Hydrogen Alliance can support rapidly the up scaling of clean hydrogen production and use in Europe.

By bringing together industry, public authorities and civil society, the European Clean Hydrogen Alliance will play a crucial role in facilitating the implementation of the European Hydrogen Strategy vision. The alliance will maximize the impact by engaging all stakeholders in the hydrogen value chain and by mobilising resources to develop an investment agenda to stimulate the roll out of production and use of renewable and low-carbon hydrogen, and to build a concrete pipeline of projects. This will create the base for a sustainable and competitive industrial hydrogen ecosystem in the EU.

1.13 ERCIM - European Research Consortium for Informatics and Mathematics



NTNU Contact Persons: Monica Divitini and John Krogstie

URL: https://www.ercim.eu/ and https://www.ntnu.edu/ie/ercim

Administrative Contact Persons: <u>Lena Haugen</u> and <u>Harald Lenschow</u> Administrative unit: <u>Faculty of Information Technology and Electrical</u>

Engineering (IE)

Short description:

The main objective of ERCIM is to contribute to a leading role of Europe in ICT:

- by building a European-wide, open network of centres of excellence in ICT;
- by excelling in research and by acting as a bridge to applications;
- by being internationally recognized as a major representative organisation in its field;
- by acting as an interface for the non-EU member institutions within the European Community and other international organisations;
- by cooperating with other international organisations in its field;
- by promoting cooperation in research, technology transfer, innovation and training.

ERCIM Representatives:

ERCIM Representative	J <u>ohn Krogstie</u>
Human Capital Task Group	<u>Monica Divitini</u>
Editor	<u>Monica Divitini</u>
Programme forPhD Education	<u>Harald Lenschow</u>

1.14 HiPEAC - High Oerfirnabce, Edge and Cloud computing COMPILATION



NTNU Contact Person: Magnus Själander

URL: https://www.hipeac.net/

Administrative Contact Person: Filip Jessen

Administrative unit: Faculty of Information Technology and Electrical

Engineering (IE), Department of Computer Science (IDI)

Short description:

HiPEAC (High Performance, Edge And Cloud computing) is the premier focal point for networking, dissemination, training, and collaboration activities in Europe for researchers, industry, and policy related to computing systems. Today, its network, the biggest of its kind in Europe, numbers over 2,000 specialists.

HiPEAC's mission is to advance computer architecture and computing systems research and development as a discipline in Europe. Its objectives are to:

- Secure and strengthen a leading position for Europe in computing systems that support all aspects of modern society by advancing computing systems as a discipline.
- Prepare the next generation of world-class computing systems scientists and engineers in Europe by supporting their academic and professional development.
- Build a dynamic ecosystem for the design and implementation of computing systems in Europe by bringing together European research, industry, SMEs, and policy.
- Align research efforts in computing systems and strengthen research impact in Europe by identifying long-term challenges in computing systems and articulating their impact on modern society.

For Researchers

Participating in HiPEAC allows academic members to collaborate across disciplines and find partners for research projects or business ventures, as well as attracting new students to their areas of study. It allows them professional development opportunities and gives them greater visibility.

1.14 HiPEAC - High Oerfirnabce, Edge and Cloud computing COMPILATION



For Industry

By participating in HiPEAC, industry members gain access to over 800 PhD students with the specialist skills needed for a wide range of computing roles. They can form partnerships with researchers and get access to the latest research developments, as well as influence the direction of computing systems research through the HiPEAC Vision and European Commission concertation meetings.

For projects and interest groups

HiPEAC helps European Commission-funded project leaders recruit the specialist staff they need to carry out their research. It provides numerous opportunities for the dissemination of project results and helps projects gain greater visibility in the research community while giving them exposure to industry representatives and potential future investors.

If you represent a technology cluster or representative body for technology professionals, joining HiPEAC will help you stay informed about the latest advances in the field. HiPEAC networking events are the ideal way to catch up with expert colleagues and build or consolidate technology communities.

For Students

HiPEAC provides grants for industrial and academic placements, and opportunities to learn from the best computing professors in the world. It is an incubator for the next generation of computing systems talent.

For Innovators

HiPEAC allows innovation specialists access to a large network of highly specialized researchers and makes them the first to learn about research results that could be turned into disruptive products or services.

1.15 Informatics Europe



NTNU Contact Person: <u>Heri Ramampiaro</u> URL: <u>https://www.informatics-europe.org/</u>

Administrative Contact Person:

Administrative unit: Faculty of Information Technology and Electrical

Engineering (IE), Department of Computer Science (IDI)

Short description:

The European Computer Science Summit has been organised annually by Informatics Europe since 2005. In fact, the origins of Informatics Europe date back to the first ECSS held at ETH Zurich in 2005, when for the first time, heads of Informatics departments throughout Europe met to discuss critical issues and common concerns related to their discipline.

Since then, ECSS continues to gather deans, department chairs and senior faculty of leading European Computer Science and Informatics faculties, departments, research institutes and laboratories.

The Summit is devoted to all aspects of Informatics: education, research, funding, entrepreneurship, management, career development, and policies.

The high calibre of the speakers, since the very first Summit in 2005, has established the ECSS as one of the most prominent meetings of the European Informatics community.

Purpose of ECSS

Debate the future of the discipline, its role and influence in both academy and society.

Expand the international network of deans, heads of departments, and research directors in Informatics.

Provide a forum for discussion and exchange of solutions and best practices on common issues.

Examine ways in which deans, department heads, and research directors in Informatics can work together to improve teaching and research, implement the Bologna process, can influence the policies of their universities, governments and the EU, and take joint initiatives on common issues.

Provide opportunities for liaisons with other groups pursuing common interests.

1.16 Magalhães Network



NTNU Contact Person: TBC

URL: https://www.magalhaes-network.org/
Administrative unit: International Relations

Short description:

NTNU's membership in the Magalhães Network is active from 19.11.2018. It is a network consisting of 20 European and 15 Latin American universities. The network focus on student exchanges in the field of engineering and architecture.

1.17 N5T - Nordic Five Tech



NTNU Contact Person: Oddrun Walstad Maaø

Administrative unit: Rector's office

Short description:

Nordic Five Tech (N5T) is a strategic alliance of five Nordic technological universities.

N5T Secretariat	Oddrun Walstad Maaø
N5T Committee	<u>Marit Reitan</u>
N5T Presidents	<u>Tor Grande</u>
N5T Presidents' Personal Assistants	<u>Ingeborg Vasli</u>
N5T Committee Personal Assistants	<u>Kirsti Klokkerhaug</u>
JMP Administrators	<u>Kirsti Klokkerhaug</u>
JMP in Environmental Engineering	Marius Møller Rokstad and Andreas Noteng
JMP in Cold Climate Engineering	Knut Vilhelm Høyland
JMP in Maritime Engineering	<u>Eilif Pedersen</u>
JMP Recruitment Workgroup	<u>Cecilie Aune</u>
N5T Research Funding Workgroup	<u>Kari Håland</u>

1.17 N5T - Nordic Five Tech

NORDIC FIVE TECH



N5T Peer Evaluation Workgroup	<u>Audun Grøm</u> and <u>Nils Rune Bodsberg</u>
N5T Strategic Student Mobility Workgroup	<u>Gunnar Bergseth</u> and <u>Eirin Bakken</u>
N5T Lifelong Learning Task Force	<u>Ragna Ann Berge</u>
N5T Global Cooperation Task Force	<u>Patrick Reurink</u>
N5T Battery Initiative Task Force	<u>Øyvind Gregersen</u>
N5T open Science Task Force	<u>Hilde Røysland</u>
N5T Corporate Collaboration Network	<u>Håvard Wibe</u>
N5T PhD Admin Network	<u>Gro Lurås</u> and <u>Harald Lenschow</u>
N5T Research Infrastructure Network	<u>Thor Bjørn Arlov</u>
N5T Strategic Innovation Network	<u>Toril Hernes</u>
N5T Entrepreneurship Education Network	<u>Øystein Widding</u>
N5T Arctic Cooperation Network	<u>Thor Bjørn Arlov</u>

1.18 NORDTEK



NTNU Contact Person:

URL: http://nordtek.net/

Short description:

The leader of FUS (Executive Committee of Engineering Education, see Innsida for more information) usually represent NTNU at NORDTEK meetings.

NORDTEK is a network of the Rectors and Deans of the Technical Universities in the five Nordic countries. Membership requires that you must have a background in advanced engineering up to the Master's level and PhD in a technical research field. The members represent 27 universities, more than 120,000 students, teachers and researchers.

NORDTEK shall through exchange of experience, collaboration and cooperation:

- Develop the comparative strengths of the member schools
- Maintain and strengthen the international position of Nordic advanced engineering education
- Maintain and strengthen the international position of Nordic engineering research and research training
- Enforce youth interest in studying advanced engineering
- Be a potential Pressure Group nationally, in the Nordic context, and internationally
- Represent the Nordic perspective in relevant European and International forums.

NORDTEK's prime activities are the Mobility program for students and teachers, the annual Rectors' Conference, Projects, incl. Annual Benchmarking of the member schools.

1.19 S Group - European Universities Network



NTNU Contact Person: Wolfgang Laschet

URL: https://sgroup-unis.eu/

Administrative unit: International Relations

Short description:

Vision

The SGroup European Universities' Network aims to strengthen the institutional capacities of its member universities to reinforce their international visibility, expand their collaboration opportunities in education and research and improve the quality of their governance, teaching, research and administrative practices. It seeks to achieve this through the transfer of knowledge, the development of strategic alliances and the improvement of intercultural understanding.

Mission

The SGroup Network is a dynamic platform for university collaboration among European and non-EU institutions to develop the internationalisation of its members, to foster university excellence in education and research and to promote continuous adaptation to educational and societal needs in a creative and innovative way.

1.20 TIME Association - Top Industrial Managers Europe Association



NTNU Contact Person: Wolfgang Laschet

URL: http://www.time-association.org/double-degrees/

Administrative unit: International Relations

Short description:

T.I.M.E. Double Degrees

T.I.M.E. Double Degrees are organised under bilateral agreements between two of the Association's members.

In principle, voluntary bilateral agreements may be signed between any two T.I.M.E. members.

However, to support our goal of cultural and linguistic diversity, the two signatories may not be from the same country.

What are the main characteristics?

During your study period abroad as a T.I.M.E. student, you will experience:

- High-level education in a different cultural context, educational system and (usually) language.
- Projects in research laboratories.
- International team-working.
- Development of interpersonal and intercultural skills.
- Language learning.
- In-depth cultural and international exposure.
- Opportunities for Internships in companies.

1.21

WEGEMT - European Association of Universities in Maritime Technology and Related Sciences (West EuropeanGraduate Education in Maine technology)



NTNU Contact Person: Bjørn Egil Asbjørnslett

URL: http://www.wegemt.com/

Administrative Contact Person: Miriam Khider

Administrative unit: Faculty of Engineering (IV), Department of Marine

Technology (IMT)

Short description:

WEGEMT is a European Association of 40 Universities in 17 countries. It was formed in 1978 with the aim of increasing the knowledge base, and updating and extending the skills and competence of practicing engineers and postgraduate students working at an advanced level in marine technology and related sciences.

It was established as a "stichting" under Dutch law with its registered office in Delft. At present, the Associates are drawn from universities in Europe, including Scandinavia, the former Eastern Europe and the CIS. They have in common, a capability, expertise and experience to teach and carry out research in marine technology and related sciences.

Status, Structure and Management

WEGEMT is a not-for-profit organisation which is contribution-based. Each University Associate is invited to make a contribution once a year. In addition to this, the organisation is supported by miscellaneous sales of publications and by work under contracts. Any contracts must however, further the aim of the Association. The Association is governed by an Executive Committee made up of fourteen elected representatives from within the Associates. Representatives are permitted to have a seat on the Executive Committee for a period of three years. They are re-electable once, for a period of a further three years. No individual university is permitted to be represented on the Executive Committee for a period of more than six years consecutively. The Executive Committee governs the organisation by setting policy and identifying priorities, usually looking 3 – 5 years in advance. They have the power to establish ad-hoc Working Groups to look at special areas of interest and to invite further representation from within the Associates. Day to day running of WEGEMT activities is carried out through its Secretariat which is based at 10 Upper Belgrave Street London at the offices of The Royal Institution of Naval Architects.

1.21

WEGEMT - European Association of Universities in Maritime Technology and Related Sciences (West EuropeanGraduate Education in Maine technology)



The Associates have at least one general assembly each year, usually hosted by one of the Universities. The Secretariat's role is key to the organisation, providing information to the Associates about WEGEMT activities, and encouraging and supporting their involvement in new initiatives. the Secretariat also undertakes the management of many of WEGEMT's activities, it supports the Executive Committee and acts as a first port of call for customers.

It should go without saying that WEGEMT openly collaborates with organisations outside its Association. It is keen to work with industry, professional bodies, classification societies, and other organisations and societies who are involved with marine technology. In a similar vein, WEGEMT is particularly keen to support and encourage the programmes of Research and Development (R&D), Education and Training (E&T), and Information Exchange and Dissemination, of the European Commission where they target marine technology.

2. RESEARCH INFRASTRUCTURES (ERIC & ESFRI)

2.1 BBMRI- Biobanking and Biomolecular resources research infrastructure



NTNU Contact Person: Kristian Hveem

URL: http://www.bbmri-eric.eu/

Administrative unit: Faculty of Medicine and Health Sciences (MH),

Department of Public Health and Nursing (ISM)

Short description:

BBMRI-ERIC shall establish, operate and develop a pan-European distributed research infrastructure of biobanks and biomolecular resources in order to facilitate the access to resources as well as facilities and to support high quality biomolecular and medical research. BBMRI-ERIC operates on a non-economic basis.

The activities of BBMRI-ERIC shall be politically neutral and guided by the following values: pan-European in scope, combined with scientific excellence, transparency, openness, responsiveness, ethical awareness, legal compliance and human values.

BBMRI-ERIC is set up as a distributed research infrastructure in most, if not all European Member States. BBMRI-ERIC consists of 19 Member States and one International Organisation, making it one of the largest research infrastructures in Europe.

Members: Austria, Belgium, Czech Republic, Estonia, Finland, France, Germany, Greece, Italy, Latvia, Malta, the Netherlands, Norway, Poland, Sweden, and the United Kingdom.

2.1 BBMRI- Biobanking and Biomolecular resources research infrastructure



Observer: Cyprus, Switzerland, Turkey, IARC/WHO

The Preparatory Phase of BBMRI: In 2008, BBMRI was one of the first projects entering the European Research Infrastructure Preparatory Phase of the ESFRI roadmap funded by the European Commission (GA 212111), lasting for 3 years until January 2011. At this time, BBMRI has grown into a 54-member consortium with more than 225 associated organisations (largely biobanks) from over 30 countries.

Awarded ERIC Legal Status on 3 December 2013: This specific legal form is designed to facilitate the joint establishment and operation of research infrastructures of European interest and allows pulling together biobanks and biomolecular resources into a pan-European facility and providing access to collections of partner biobanks and biomolecular resources, their expertise and services on a non-economic basis.

CLARIN (CLARINO) - Common 2.2 Language Resources and Technology Infrastructure Norway



NTNU Contact Person: Björn Gambäck

URL: https://clarin.w.uib.no/

Administrative Contact Person:

Administrative unit: Faculty of Information Technology and Electrical

Engineering (IE)

Short description:

CLARINO is a Norwegian infrastructure project jointly funded by the Research Council of Norway (2012–2019 under contract 208375) and by a consortium of Norwegian universities and research institutions. It is operating the Norwegian part of CLARIN ERIC. The aim is to make existing and future language resources easily accessible for researchers and to bring eScience to humanities disciplines.

Any researcher can, through federated authentication, gain access to a vast body of language resources, including e.g. speech recordings, literary and historic archives, linguistic corpora, etc. In addition, CLARIN offers services for depositing, citing, searching and processing language data.

2.3 EATRIS - European Infrastructure for Traditional Medicine



NTNU Contact Person: Olav Haraldseth and Kristian Hveem

URL: https://eatris.eu/

Administrative Contact Person:

Administrative unit: Faculty of Medicine and Health Sciences (MH)

TSO/ET: Health

Short description:

EATRIS helps you de-risk and add value to your drug, vaccine or diagnostic development programme. We do this by providing fast, tailored access to cutting-edge enabling technologies in translational research.

INFRASTRUCTURE

Via our central hub, you can access the vast array of clinical expertise and high-end facilities that are available within the 80+ top-tier academic centres across Europe.

PRODUCT PLATFORMS

EATRIS focuses on preclinical and early clinical development of drugs, vaccines and diagnostics. Solutions are provided in the fields of advanced therapy medicinal products, biomarkers, imaging and tracing, small molecules and vaccines.

The wide-ranging services portfolio focuses on supporting early decision-making and derisking of projects. Examples include validation and development of in vitro and in vivo biomarkers for patient stratification, molecular imaging tracers for drug development programmes, GMP manufacturing of cellular therapy products, patient-derived xenograft models, and many more highly specialised capabilities.

2.4 ECCSEL - European Carbon dioxide Capture and Storage Laboratory Infrastructure



NTNU Contact Person: Sverre Quale

URL: http://www.eccsel.org/

Administrative Contact Person: Sina Blix Prestmo

Administrative unit: Faculty of Engineering, (IV), Department of Energy and

Process Engineering (EPT)

Short description:

The mission of ECCSEL is opening access for researchers to a top-quality European research infrastructure devoted to second and third generation CCS technologies in an efficient and structured way to help enabling low to zero CO2 emissions from industry and power generation to combat global climate change.

The ECCSEL consortium teams up selected Centres of Excellence on Carbon Capture and Storage research (CCS) from 9 countries across Europe. The mission is to implement and operate a European distributed, integrated Research Infrastructure (RI) initially based on a selection of the best research facilities in Europe for CO2 capture, storage and transport research. A number of those facilities are planned to be upgraded in the future and later new facilities are planned to be constructed in order to:

- Provide a scientific foundation to respond systematically to the urgent R&D needs in CCS at a Pan-European level, in a short- and long-term perspective
- Maintain Europe at the forefront of the international CCS scientific community
- Make the European Research Area more attractive for both European and international scientists, reinforce cooperative connections between research institutions and attain greater insight into the social and economic impact of European science.
- Optimize the value of the European Communities financial support through better utilisation of new and existing research infrastructure.

2.5 ECRIN - European Clinical Research Infrastructure Network



NTNU Contact Person: Valentina Cabral Iversen

URL: http://www.ecrin.org/

Administrative Contact Person:

Administrative unit: Faculty of Medicine and Health Sciences (MH),

Department of Mental Health (IPH)

TSO/ET: Health

Short description:

The European Clinical Research Infrastructure Network (ECRIN) is a not-for-profit intergovernmental organisation that supports the conduct of multinational clinical trials in Europe. As of 2013, ECRIN has the legal status of a European Research Infrastructure Consortium (ERIC).

• Based in Paris, we work with European Correspondents across Europe, national networks of clinical trial units (CTUs), as well as numerous European and international stakeholders involved in clinical research.

2.6 ELIXIR



NTNU Contact Person: Finn Drabløs and Stig Omholt

URL: https://www.elixir-europe.org/

Administrative Contact Person:

Administrative unit: Faculty of Medicine and Health Sciences (MH),

<u>Department of Clinical and Molecular Medicine</u> (IKOM)

TSO/ET: Health

Short description:

ELIXIR is an intergovernmental organisation that brings together life science resources from across Europe. These resources include databases, software tools, training materials, cloud storage and supercomputers.

The goal of ELIXIR is to coordinate these resources so that they form a single infrastructure. This infrastructure makes it easier for scientists to find and share data, exchange expertise, and agree on best practices. Ultimately, it will help them gain new insights into how living organisms work.

<u>TeSS</u> is an example of an ELIXIR resource. TeSS is online training portal that gathers life science training materials and training courses from across Europe, and allows you to search it in one website. This makes it easier for scientists to find the training they need, and gives the training courses wider publicity.

ELIXIR includes 21 members and over 180 research organisations. It was founded in 2014, and is currently implementing its first five-year scientific programme.

27 EuBI - Euro-Biomanaging



NTNU Contact Person: Olav Haraldseth URL: http://www.eurobioimaging.eu/

Administrative Contact Person:

Administrative unit: Faculty of Medicine and Health Sciences (MH),

Department of circulation and medical imaging (ISB)

Short description:

The European Research Infrastructure for Imaging Technologies in Biological and Biomedical Sciences (Euro-Biolmaging, EuBI or EuBI ERIC) provides open physical user access to a broad range of state-of-the-art technologies in biological and biomedical imaging for life scientists. In addition, EuBI will offer image data support and training for infrastructure users and providers.

The EuBI consists of a set of 29 geographically distributed Node Candidates (specialised imaging facilities) that can grant access to scientists from all European countries and beyond. Currently, researchers can apply to use some of 36 imaging technologies offered through Euro-BioImaging.

EuBI started interim operation in May 2016 and all information about the Interim operation can be found here www.eurobioimaging-interim.eu

The whole infrastructure is supported by the EuBi Hub Candidate, which is the management and coordination part of Euro-Biolmaging. EuBI Hub Candidate is composed of three parties: Finland, Italy and EMBL. Finland is managing the User Access to EuBI and will host the ERIC seat and take on the issues of quality control, delivery of service, user satisfaction, and scientific excellence. EMBL will support biological imaging community and provide image data services, while Italy will support biomedical imaging community.

EuBI will continuously evaluate and acquire new imaging technologies to ensure the sustained delivery of cutting-edge services.

27 EuBI - Euro-Biomanaging



Since it started its EC-funded Preparatory Phase I in December 2010, EuBI has been broadly supported by the European research community consisting of national BioImaging chapters in 25 European countries, with over 3000 stakeholders affiliated with major European research organizations and by the official Euro-BioImaging Industry Board.

Currently, the Euro-BioImaging Interim Board (IB) federates 15 member countries and the EMBL, and has created a common European budget from voluntary national contributions to launch the EuBI European Research Infrastructure Consortium (ERIC).

This intergovernmental effort has been boosted by the award of the EC H2020 Preparatory Phase II project, which will deliver turn-key procedures and rules for the operation of the EuBI ERIC. In addition to launching operations in Europe, EuBI is initiating a global research infrastructure collaboration, facilitated by the EC H2020 project Global BioImaging (GBI), designed to integrate with partner research infrastructures for imaging technologies worldwide.

EuBI will initially work together with imaging infrastructure experts from Australia, Argentina, South Africa, India, Japan and the United States of America, to further open and improve the provision of imaging services to biological and medical researchers worldwide.

3. JOINT PROGRAMMING AND STRATEGIC INITIATIVES

NTNU is active in several Joint Programmes and Strategic Initiatives. The overall aim of the Joint Programming process is to focus research on several key areas for Europe. Participation in JPIs is committed at the national level, not at the institutional level.

3.1 HDHL - Healthy Diet Healthy Life



NTNU Contact Person: Eva Falch

URL: http://www.healthydietforhealthylife.eu/

Administrative Contact Person: TBC

Administrative unit: Faculty of Natural Sciences (NV)

Theme/research area: Health and Food

Short description:

Joint programming of research in the field of nutrition, food and health will provide for coordination of research on the impact of diet and lifestyles on health, contribute significantly to the construction of a fully operational European Research Area on prevention of diet-related diseases and strengthening leadership and competitiveness on the research activities in this field. The ambitious major goals of JPI HDHL are as follows:

1. The coordination of the scope of research programmes across Europe and reducing duplication of efforts.

3.1 HDHL - Healthy Diet Healthy Life



- 2. The allowance for easier to address common challenges developing suitable solutions with the same objective concerning food, nutrition and active life policy in the international arena while taking into consideration cultural diversities among countries.
- 3. The promotion of scientific excellence through joint activities with common funding and peer-review processes to minimise fragmentation of research activities and to use public resources more efficiently and effectively improving the accountability and transparency of public research programmes.
- 4. The support of cross-border collaboration and facilitation of data pooling and their collection in a uniform and standardised way.
- 5. The sharing of expertise scattered across countries or throughout Europe as a whole promoting creation of a critical mass, cross-border mobility and training to facilitate timely dissemination and translation of research results to inform public health practice and policy.
- 6. The increase of the scientific, technological and innovative impacts of public investments in research by strengthening the coordination with other related policies through greater programme visibility and promotion of cross-border policy learning.

3.2 JPI Oceans - Healthy and Productive Seas and Oceans



NTNU Contact Person: Anastasios Lekkas

URL: http://www.jpi-oceans.eu/ **Administrative Contact Person:**

Administrative unit:

TSO/ET: Oceans

Theme/research area: Oceans

Short description:

The Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans) is an intergovernmental platform, open to all EU Member States and Associated Countries and with the participation of international partners on actions of mutual interest.

In its role as a coordination platform, JPI Oceans focuses on making better and more efficient use of national research budgets, which represent 88% of the research funding within Europe. One of JPI Oceans' goals is to develop joint research programmes in which countries can be involved on a voluntary basis (variable geometry). Participating countries also decide what contribution to make: this may include institutional, project-related or new funding.

JPI Oceans aims to add value by:

- 1. avoiding fragmentation and unnecessary duplication,
- 2. planning common and flexible initiatives,
- 3. facilitating cooperation and foresight, and
- 4. establishing efficient mechanisms for interaction and knowledge transfer between the scientific community, industry & services, and policy makers at high level in order to solve the grand challenges more effectively.

5.

JPI Oceans welcomes the opportunity and encourages working with non- EU Countries on research & policy initiatives in order to achieve its objectives and will actively seek out partnerships with non-EU Countries.

The goals and objectives of JPI Oceans address the intersections between the marine environment, climate change and the maritime economy enabled by observations, infrastructure, technologies and human capacities.

3.2 JPI Oceans - Healthy and Productive Seas and Oceans



Goals:

- Enable the advent of a knowledge based maritime economy, maximizing its value in a sustainable way
- Ensure Good Environmental Status of the seas and optimize planning of activities in the marine space
- Optimize the response to climate change and mitigate human impacts on the marine environment

JPI Oceans Strategy

The strategy of JPI Oceans is defined by its Strategic Research and Innovation Agenda (SRIA) which was published in May 2015. The SRIA presents ten Strategic Areas, developed and agreed by JPI Oceans (with the support of CSA Oceans) as strategic priorities for marine and maritime research in Europe. The ten strategic areas are:

- 1. Exploring Deep Sea Resources
- 2. <u>Technology and Sensor Developments</u>
- 3. Science Support to Coastal and Maritime Planning and Management
- 4. Linking Oceans, Human Health and Wellbeing
- 5. Interdisciplinary Research for Good Environmental Status
- 6. Observing, Modelling and Predicting Oceans State and Processes
- 7. <u>Climate Change Impact on Physical and Biological Ocean Processes</u>
- 8. Effects of Ocean Acidification on Marine Ecosystems
- 9. Food Security and Safety Driving Innovation in a Changing World
- 10. <u>Use of Marine Biological Resources through Development and Application of Biotechnology</u>

In addition to the Strategic Areas, three cross-cutting issues have been identified where JPI Oceans can add value in the European landscape.

- 1. Science-Policy Interface
- 2. Human Capacity Building
- 3. Infrastructures

An overview of all actions and projects initiated by JPI Oceans can be found <u>here</u>.

3.3 Urban Europe Research Alliance - Global Urban Challenges, Joint European Solutions



NTNU Contact Persons: Annemie Wyckmans

URL: https://jpi-urbaneurope.eu/stakeholders-partners/uera/

Administrative Contact Person: Tone Woie Alstadheim

Administrative unit: Faculty of Architecture and Design (AD)

Theme/research area: Smart Cities

Short description:

The Urban Europe Research Alliance (UERA) brings together research organisations and aims to strengthen, expand and optimise coordination activities and research planning in Europe, in order to avoid fragmentation and optimise resources in the field of urban research and innovation capabilities. Currently UERA counts 47 European research organisations from fifteen different countries. UERA wants to build a community of researchers, professors, and PhD students. Together, this community will be able to conduct work advancing scientific excellence in the field of urban research. Approaches that are integrated, systemic, environmental, and socio-economic in their consideration, are at the heart of UERA.

3.4 New European Bauhaus



NTNU Contact Person: Florian Schneider

URL: https://new-european-bauhaus.europa.eu/

Administrative Contact Person: Tone Woie Alstadheim

Administrative unit: Faculty of Architecture and Design, Trondheim Academy

of Fine Art

Short description:

The New European Bauhaus initiative connects the European Green Deal to our daily lives and living spaces. It calls on all Europeans to imagine and build together a sustainable and inclusive future that is beautiful for our eyes, minds, and souls.

By creating bridges between different backgrounds, cutting across disciplines and building on participation at all levels, the New European Bauhaus inspires a movement to facilitate and steer the transformation of our societies along three inseparable values:

- **sustainability**, from climate goals to circularity, zero pollution, and biodiversity
- aesthetics, quality of experience and style beyond functionality
- **inclusion**, from valuing diversity to securing accessibility and affordability

The New European Bauhaus brings citizens, experts, businesses, and institutions together to reimagine sustainable living in Europe and beyond. In addition to creating a platform for experimentation and connection, the initiative supports positive change also by providing access to EU funding for beautiful, sustainable, and inclusive projects.

3.5 Smart Cities Marketplace

NTNU Contact Persons: <u>Annemie Wyckmans</u> and <u>Dirk Ahlers</u>

URL: https://smart-cities-marketplace.ec.europa.eu/

Administrative Contact Person: <u>Tone Woie Alstadheim</u>

Administrative unit: Faculty of Architecture and Design (AD), Department of

Architecture and Planning (IAP)

Short description:

The Smart Cities Marketplace is a new platform which was created from a merger of the Marketplace of the European Innovation Partnership on Smart Cities and Communities (EIP-SCC) and the Smart Cities Information System (SCIS). It is a major market-changing undertaking supported by the European Commission bringing together cities, industries, SMEs, investors, researchers and other smart city actors.

The URBAN-EU-CHINA Innovation Platform (H2020) cooperates with the formerly EIP-SCC, now Smart Cities Marketplace, on creating and managing a Strategic Cooperation Group, to facilitate international science and industry partnerships between China and the EU. This initiative targets EIP SCC members that are interested or experienced in sustainable urbanisation cooperation with China. EIP SCC members are invited to URBAN-EU-CHINA events, and URBAN-EU-CHINA participates in EIP SCC events with e.g. breakfast tables. This initiative will be linked to the SCC01 Smart City Lighthouse projects and their individual cooperations with China, in an effort to cluster European cities and their local innovation systems, and give them more targeted support in their cooperation with China. The EIP SCC members are also asked to give input to the Research and Innovation Agenda for EU-China Cooperation on Sustainable Urbanisation.

With the +CityxChange Smart City Lighthouse project (H2020 SCC01), NTNU has a third entry point into Smart Cities Marketplace. Within Smart Cities Marketplace, the coordinators, cities and industry partners of SCC01 Smart City Lighthouse projects interact to exchange experiences and learn from each other. This has become of particular importance with the launch of the new SET-Plan 3.2 strategy to create 100 Positive Energy Districts (PED) by 2025, as +CityxChange is one of the first SCC01 projects to demonstrate how to achieve a PED.

Furthermore, the new Initiative in SCM on Regulatory Frameworks within the Integrated Planning, Policy and Regulation Action Cluster is lead by Prof. Annemie Wyckmans with Trondheim municipality and Powel AS as co-lead.

3.6 SPIRE - Sustainable Process Industry Through Resource and Energy Efficiency



NTNU Contact Person: Maria Wallin

WG2 - Electrification: Sotirios Grammatikos

WG3 - H2:

WG4 - CCU-CO2:

WG5 - Resource and Energy Efficiency: Maria Wallin

WG6 - Industrial Symbiosis: Johan Berg Pettersen

WG7 - Digital: <u>Vasileios Gkioulos</u>

URL: https://ec.europa.eu/research/industrial_technologies/sustainable-

process-industry_en.html and https://www.spire2030.eu/intro

Administrative unit: Faculty of Natural Sciences (NV)

Short description:

EU process industry is at the core of most industrial value chains and faces the key challenge of having a high dependence on resources (energy, materials and water). An alliance of eight sectors of the European process industry (cement, ceramics, chemicals, engineering, minerals and ore, non-ferrous metals, steel and water) launched a new initiative on Sustainable Process Industry through Resource and Energy Efficiency (SPIRE), which is now becoming a contractual public-private partnership (PPP) under the new EU framework programme Horizon 2020. The sectors united under SPIRE include more than 450.000 individual enterprises, provide jobs for 6,8 million employees and generate annually more than € 1.600 billion in turnover. As such they are vital for Europe, representing 20% of the total European industry, both in terms of employment and turnover.

The SPIRE community has set out a research and innovation strategy reflected in the multiannual roadmap for 2014-2020, which has been the subject of an extensive public consultation. The research and innovation activities proposed are expected to lead to the breakthrough technologies needed to make the European process industry more sustainable and competitive, through improvements in resource and energy efficiency

3.6 SPIRE - Sustainable Process Industry Through Resource and Energy Efficiency



The SPIRE PPP follows a cross-sectorial holistic approach, looking into all the components of the industrial operations, which are clearly identified in the domains covered in the roadmap (Feed, Process, Applications and Waste2Resource), and also addresses the non-technological barriers identified in the horizontal and outreach components. The technologies developed should lead to a decrease of 30% in fossil energy intensity and a reduction of 20% in the use of non-renewable resources; the achievement of these targets will in turn lead to a 40% decrease in CO2 equivalent footprints. With these ambitious objectives, the SPIRE PPP supports the achievement of the goals set out by the Europe 2020 strategy and will contribute to the knowledge-based re-industrialisation of Europe, leading to the creation of growth and jobs.

The realisation of the SPIRE objectives is considered essential in order to rejuvenate the European process industry, to make it more competitive and sustainable, and lead to European growth and jobs.

- SPIRE at a glance
- <u>Sustainable Process Industry Association</u> (representing the PPP Private Side)

4. EUROPEAN **TECHNOLOGY PLATFORMS (ETP)**

European Technology Platforms (ETPs) are industry-led stakeholder for a recognised by the European Commission as key actors in driving innovation, knowledge transfer and European competitiveness.

ETPs develop research and innovation agendas and roadmaps for action at EU and national level to be supported by both private and public funding. They mobilise stakeholders to deliver on agreed priorities, share information across the EU and help deliver solutions to major challenges of key concern to citizens.

4.1 EATIP - European Aquaculture Technology European Aquaculture and Innovation Platform



NTNU Contact Person: Kjell Inge Reitan

URL: http://eatip.eu/

Administrative Contact Person: Alexandra Neyts Administrative unit: Faculty of Engineering (IV)

Short description:

EATIP is an international non-profit association dedicated to developing, supporting and promoting aquaculture and, especially and specifically, technology and innovation in aquaculture in Europe so as to:

- Establish a strong relationship between aquaculture and the consumer
- Assure a sustainable aquaculture industry
- Consolidate the role of aquaculture in society

EATIP has been designed to include all members of the European aquaculture value chain, from suppliers through producers to processors within the profession, accompanied by leading research groups and key representative organisations.

4.2 Manufuture



NTNU Contact Person: Geir Ringen URL: http://www.manufuture.org/

Administrative Contact Person: Miriam Khider

Administrative unit: Faculty of Engineering (IV), Department of Manufacturing

and Civil Engineering (IVB)

Short description:

The mission of the European Technology Platform Manufuture is to propose, develop and implement a strategy based on Research and Innovation, capable of speeding up the rate of industrial transformation to high-added-value products, processes and services, securing high-skills employment and winning a major share of world Manufacturing output in the future knowledge-driven economy.

The ManuFuture National/Regional Technological Platforms (NRTPs) are created in EU member states and adopt the main strategic and development goals defined by the EPT in its main documents: ManuFuture Vision 2020 and Manufuture Strategic Research Agenda.

4.3 NEM - New European Media



NTNU Contact Person: Andrew Perkis

URL: https://nem-initiative.org/

Administrative Contact Person: Filip Jessen

Administrative unit: Faculty of Informational Technology and Electrical

Engineering (IE), Department of Electrical Systems (IES)

Short description:

The NEM Initiative (New European Media Initiative) was established as one of the European Technology Platform under the Seventh Framework Programme, aiming at fostering the convergence between consumer electronics, broadcasting and telecoms in order to develop the emerging business sector of networked and electronic media. In order to respond to new need and requirements of the Horizon 2020 programme, the NEM initiative enlarged its focus towards creative industries and changed its name from Networked an Electronic Media Initiative to New European Media, dealing with Connected, Converging and Interactive Media & Creative Industries, driving the future of digital experience.

The NEM constituency includes all major European organisations working in the networked and electronic media area, including content providers, creative industries, broadcasters, network equipment manufacturers, network operators and service providers, academia, standardisation bodies and government institutions. Those actors share a common Vision and have been producing a Strategic Research and Innovation Agenda (SRIA) as well as position papers, in order to accelerate the innovative development of the new sector in a harmonised and fruitful way and to place European industry at the forefront of the information era.

4.4 ETIP OCEAN - Ocean Europe



NTNU Contact Person: <u>Ingrid Schjølberg</u>

URL: https://www.etipocean.eu/

Administrative Contact Person: Miriam Khider
Administrative unit: Faculty of Engineering (IV)

TSO/ET: Oceans

Theme/research area: **Energy**

Short description:

ETIP Ocean is a recognised advisory body to the European Commission, part of the EU's main Research and Innovation policy the Strategic Energy Technology Plan (SET-Plan).

ETIP Ocean brings together around 250 experts from 150 organisations covering the entire European ocean energy sector.

In November 2016, ETIP Ocean published a first <u>Strategic Research Agenda</u> for the Ocean Energy sector. This document prioritises research topics and is the industry's main input into European and national research programmes.

ETIP Ocean was also entrusted by the European Commission to work on the technological aspects of its Ocean Energy Forum. Its main output is a <u>Roadmap</u> to commercialisation with concrete recommendations for policy makers and industry.

Building on its work and on the Ocean Energy Forum Roadmap, ETIP Ocean continues to bring together knowledge and expertise. Proposing solutions to accelerate the development of the ocean energy sector and set it along the pathway to commercialisation.

4.5 Water Europe



NTNU Contact Persons: <u>Sveinung Sægrov</u>, <u>Tone Merete Muthanna</u>

URL: https://watereurope.eu/

Administrative Contact Person: Sonja Marie Ekrann Hammer

Administrative unit: Faculty of Engineering (IV)

Short description:

The story of Water Europe, initially known as the Water Supply and Sanitation Technology Platform (WssTP), begins in 2004, when it was established by the European Commission as a European Technology Platform (ETP) to confront water-related challenges across the continent. This initiative took a significant leap forward in 2007 when it evolved into a member-driven, multi-stakeholder platform. This transformation marked a pivotal shift, widening its impact and reinforcing its foundational mission of securing a sustainable water future.

Continuing its evolution, the organisation changed its name from WssTP to Water Europe in 2019, marking a new period in which the name of the organisation captured the essense of its mission as the recognised voice and promoter of water-related innovation, research, and technology development in Europe.

With a focus on the entire water value chain, Water Europe advocates for building a water secure, sustainable, and resilient, Water-Smart Society across Europe and beyond.

Water Europe aims to make sure that everyone involved with water - from businesses to researchers, and governments join hands, in Europe and beyond to come up with better and locally adapted solutions for the water challenges.

Investing in innovative solutions and circular practices puts Europe at the forefront of the water industry worldwide. This strategic focus not only promotes water security but also enhances Europe's competitive edge, ensuring its water-related sectors lead on a global scale.

Water Europe is all about using fresh ideas and research to solve big water issues ike droughts, floods, and pollution, and the compounding effects of climate change. By embracing innovation, Europe can smartly manage water resources, demonstrating the benefits of sustainable practices for everyone on the planet.

5. ADDITIONAL INTERNATIONAL COLLABORATIONS

Several international networks, alliances, etc. did not fit any of the beforementioned categories. However, due to their influence they have been added under the category "Other". If you would like to add to the list, please contact Thomas Aarnseth.

5.1 AIB - Academy of International Business



NTNU Contact Person: Richard Glavee-Geo

URL: https://aib.msu.edu/

Administrative Contact Person:

Administrative unit: Faculty of Economics and Management (ØK)

Short description:

The Academy of International Business (AIB) is the leading association of scholars and specialists in the field of international business. Established in 1959, today AIB is a 501(c) (3) non-profit US corporation. Its current headquarters is on the campus of Michigan State University in East Lansing, Michigan, United States.

AIB currently has 3388 members in 94 different countries around the world. Members include scholars from the leading academic institutions as well as consultants and researchers. We welcome members from developing countries, newly industrialized countries, as well as industrialized countries to join.

5.2 ARC - Aqua Research Collaboration



NTNU Contact Person: Sveinung Sægrov, Tone Merete Muthanna, Cynthia

<u>Hallé</u>

URL: https://www.arc-online.eu/

Administrative Contact Person: Sonja Marie Ekrann Hammer

Administrative unit: Faculty of Engineering (IV)

Short description:

ARC's vision

The vision of the founding members of ARC is to be the European scientific collaboration of reference in the creation and application of knowledge associated with the complete water cycle.

ARC's mission

The mission of ARC is to catalyse the transition towards enhanced and more sustainable watercycle system services in Europe by:

- Increasing the stock of knowledge through research in a European Collaborative Framework;
- Supporting, demonstrating and implementing new applications through action research with end users;
- Strengthening the European watercycle research system by utilizing synergies between Europe's leading watercycle research institutes and by capacity building in regions of Europe not yet connected to the European science system.

5.3 EARPA - European Automotive Research Partners Association



NTNU Contact Persons: Magnus Langseth, Anders Hammer Strømman

URL: https://www.earpa.eu/earpa/home

Administrative Contact Person: Miriam Khider

Administrative unit: Faculty of Engineering (IV), Department of Structural

Engineering (KT)

Short description:

Founded in 2002, EARPA is the association of automotive R&D organisations. It brings together the most prominent independent R&D providers in the automotive sector throughout Europe. Its membership counts at present 53 members ranging from large and small commercial organisations to national institutes and universities.

EARPA is the platform of automotive researchers and is actively contributing to the European Research Area and the future EU RTD funding programmes.

EARPA works in close cooperation with the automotive industry, the automotive suppliers, the oil industry as well as the European Institutions and the EU Member States.

EARPA is independent from any external body or institute and is only funded by its members' fees and is governed by an Executive Board and a General Assembly.

5.4 EAWE - European Academy of Wind Energy



NTNU Contact Persons: Michael Muskulus, Tanja Bracchi

EAWE Technical Working Group: Amir Nejad

URL: https://www.eawe.eu/

Administrative unit: Faculty of Engineering (IV), Department of Civil and

Environmental Engineering (IBM)

Short description:

EAWE is a non-profit organization registered in <u>Oldenburg, Germany</u>, and is governed by Europe's leading <u>universities and research institutes</u> on wind energy. Main decisions in the organization are taken in the General Assembly in which all members have voting rights. Day to day operation is taken care of by the <u>Board</u> (president and vice-president) and the treasurer.

The work of EAWE is supported through several dedicated <u>committees</u>, including, e.g., the Strategy committee, Young Wind Doctor Award Committee, Outreach Committee, Wind Energy Science Chief Editors, and several technical committees.

5.5 EIBA - European International Business Academy



NTNU Contact Person: Bella Nujen (IIF)

URL: http://www.eiba.org

Administrative Contact Person: Thomas Aarnseth (ØK)

Administrative unit: Faculty of Economics and Management (ØK),

Department of International Business (IIF)

Short description:

The European International Business Academy (EIBA) was founded in 1974 under the auspices of the European Foundation for Management Development (EFMD) and in close cooperation with the European Institute for Advanced Studies in Management (EIASM). The Academy is a professional society for academics and practitioners with an interest in the growing field of International Business. It is distinct from many other associations in that members come from a wide variety of disciplines and functional backgrounds and share the common purpose of using an international context to cross the intellectual boundaries that so typically divide institutions of higher education.

The aim of EIBA is to serve as the core communication network for disseminating information and promoting international exchange in the field of International Business. Membership is open to individuals from Europe and elsewhere. At present, the Academy has more than 500 members from about 50 different countries representing all five continents.

5.6 ENOLL - European Network of Living Labs



NTNU Contact Person: Sobah Abbas Petersen

URL: https://enoll.org/

Administrative Contact Person: TBC

Administrative Unit: Faculty of Information Technology and Electrical

Engineering (IE), Department of Computer Science

Short description:

The European Network of Living Labs (ENoLL) is the international federation of benchmarked Living Labs in Europe and worldwide. Founded in November 2006 under the auspices of the Finnish European Presidency, the network has grown in 'waves' up to this day.

The European approach to Living Labs was created in the Unit "Collaborative working environments" of the DG INFSO (now DG CONNECT) in close collaboration with an industrial advisory group on Open Innovation (Open Innovation Strategy and Policy group – OISPG) which was founded by Bror Salmelin. The original concept was updated to open innovation environments attracting inwards investment, both intellectual and financial one.

ENoLL counts today over 130+ active Living Labs members worldwide (440+ historically recognised over 12 years), including active members in 20 of the 28 EU Member States, 2 of the candidates and it is present in 5 continents in addition to Europe. Directly, as well as through its active members, ENoLL provides co-creation, user engagement, test and experimentation facilities targeting innovation in many different domains such as energy, media, mobility, healthcare, agri-food, etc. As such, ENoLL is well placed to act as a platform for best practice exchange, learning and support, and Living Lab international project development.

5.7 EFF - European Food Forum



NTNU Contact Person: Eva Falch

URL: https://europeanfoodforum.eu/

Administrative Contact Person: Thais Mothe-Diniz

Administrative unit: Faculty of Natural Sciences (NV), Department of

Biotechnology and Food Science (IBT)

Short description:

The European Food Forum (EFF) was founded in november 2019 by 5 Members by of the European Parliament (MEP) from 3 different political groups and 5 different Member States: Róża Thun (EPP – Poland), Clara Aguilera (S&D – Spain), Irene Tolleret (Renew Europe – France), Asim Ademov (EPP Bulgaria) and Brando Benifei (S&D – Italy).

Board of Management for European Food Forum:

Representatives from the Public Institution and Civil Society Members:

- 1. Eva Falch: Vice Dean Innovation Faculty of Natural Sciences Norvegian University of Science and Technology (NTNU)
- 2. Monique Goyens: Director General The European Consumer Organization (BEUC)
- 3. Luca Moretti: Head of Bruxelles office International and European Relations Consiglio Nazionale delle Ricerche (CNR)
- 4. Vladislav Popov: Director of the Agro-ecology Center Professor of Agro-Ecology Agricultural University Plovdiv

From the Business Members, 4 elected in alphabetical order are:

- 1.David Coleman: MARS Vice President Public Affairs Europe
- 2.Antje Gerstein: German Retail Federation (HDE) Managing Director Head Brussels Office
- 3.Cristina Tinelli: Confagricoltura Head of Brussels
- 4. Marta Zuluaga Zilbermann: Cargill Vice President Government Relations EMEA

5.7 EFF - European Food Forum



Mission:

The European Food Forum is an independent, politically-led, non-partisan forum led and governed by our elected Members of the European Parliament that aims to promote open dialogue on sustainable food systems among policymakers, food supply chain actors, civil society organizations, research and academia, and other public institutions.

The European Food Forum key objectives are:

- follow up the development of appropriate public policies at European level, by integrating, anticipating and promoting key agri-food policy topics and emerging trends at European and global level, giving attention also to research related topics;
- promote the development of a common food policy by drawing on the collective intelligence of the actors in the food system also at local level;
- support the development of a common food policy designed to listen more carefully and respond more quickly to the concerns and aspirations of Europeans consumers;
- develop and maintain relations with other public and private institutions interested in these issues – the Association gives priority to problems and actions that fall within the framework of the European Union.

5.8 Healthy Measures SCIENCE BUSINESS®

NTNU Contact Person: Marius Widerøe URL: https://sciencebusiness.net/health

Administrative Contact Person: Liv Falkenberg

Administrative unit: Faculty of Medicine and Health Sciences (MH)

TSO/ET: Health and life science

Short description:

Healthy Measures is a multi-stakeholder communications platform to mobilise support for better, equitable and effective health delivery across the EU.

The key to that is a sharper focus on patient outcomes – measuring what works, and doesn't work, in treating patients from one clinic, region and member-state to another. For that, we need more experts – in industry, policy and academia – who help this effort grow across the EU, from one capital to another. Stakeholder groups need mobilising, and interconnecting, across Europe. The old silos in healthcare across Europe need to be dismantled.

5.9 IAEE - International Association for Energy Economics



NTNU Contact Persons: Ruud Egging-Bratseth and Frode Kjærland

URL: http://www.iaee.org/

Administrative Contact Person: TBC

Administrative unit: Faculty of Economics and Management (ØK),

Department of Industrial Economics and Technology Management (IØT)

TSO/ET: Energy

Short description:

We are a worldwide non-profit professional organization based in the United States, which has members in over 100 nations, who strive to provide an interdisciplinary forum for the exchange of ideas, experience and issues among professionals interested in energy economics. We actively seek those who are interested in energy economics and those who shape opinions and prepare for events which effect the energy industry.

As our main objective we want to provide for the mutual association of persons interested in energy economics in order to create a forum for professional, multinational discussion and to provide a means of professional communication and exchange for these persons. To achieve this goal, we publish three periodicals. "The Energy Journal" is a quarterly, academic publication available to all members. The "Economics of Energy & Environmental Policy" is a semi-annual publication also available to all members. Both of these publications may be purchased by non-members through our site. The IAEE Energy Forum (newsletter) delivers the latest information on the association, and contains articles that appeal to a general audience interested in the energy field. Both of these publications can be reviewed in greater detail in our publications section.

In order to meet our association's objectives, we also hold an International Energy Conference each year. Past meetings have taken place in cities such as Rome, Quebec, New Delhi, Budapest, Washington D.C. and Copenhagen. These conferences attract delegates and speakers from around the world, and from some of the most influential government, corporate and academic circles.

Membership in IAEE is open to anyone who has an interest in the field of energy economics. You are encouraged to view our site for more information. If you are interested in joining, our membership section will provide answers and has an online application.

5.10 Informs - Institute for Operations Research Informs and the Management Sciences



NTNU Contact Person: Ruud Egging-Bratseth

URL: https://www.informs.org/

Administrative Contact Person: TBC

Administrative unit: Faculty of Economics and Management (ØK),

Department of Industrial Economics and Technology Management (IØT)

Short description:

INFORMS offers a broad umbrella of services and resources to individuals interested in applying scientific methods to improve operations, analytical decision making, and management. We have become the largest non-profit organization in the world for professionals in operations research, the management sciences, analytics, and related fields within engineering, information science, decision making, quantitative methods, and business intelligence.

5.11 Nordlys



NTNU Contact Person: TBC

URL: https://www.nordlys.info/english/

Administrative unit: International Relations

Short description:

With its 37 member universities, Nordlys is one of the biggest networks within the Nordplus programme. The main goal for Nordlys is to enable and increase student mobility in the Northern Countries.

What is Nordlys?

NORDLYS is an interdisciplinary network and forms part of NORDPLUS. It was founded in 1995 and currently has 37 members. The objective of the Nordlys network is to facilitate and strengthen the mobility of students within the Nordic countries.

What is Nordplus?

<u>Nordplus</u> programme is the Nordic Council of Ministers' most important programme for Lifelong Learning. More than 10,000 people in the Nordic and Baltic regions participate in the programme each year.

The objective of the Nordplus programme is to strengthen, develop, and maintain Nordic educational cooperation and the Nordic dimension. Nordplus also aims at promoting Nordic languages, culture, and a mutual Nordic-Baltic linguistic and cultural understanding.

More information:

Nordplus Higher Education

http://www.nordplusonline.org/Who-can-apply/Nordplus-Higher-Education

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