

## NC2I-R

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# D1.11 – Analysis and recommendations on possible governance schemes

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### Summary

Analysis and recommendations on possible governance schemes for the Nuclear Cogeneration Industrial Initiative (NC2I)

#### Approval

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## 1 Introduction

The **Nuclear Cogeneration Industrial Initiative** is organised under the SNETP, a body recognised by the European Commission. NC2I currently has no legal status and is governed by a non-legal Memorandum of Understanding.

The initiative is supported by a FP7 Euratom project *NC2I-R* which has for objective to prepare the following:

- Update of the roadmap for prototype design and construction
- Assessing possible financial instruments from private and public sources, for design & construction
- Assessing opportunity of legal construction for the NC2I Task Force, and for the prototype project

The initiative of the European level has been reinforced in 2013 by building a Trans-Atlantic partnership to accelerate the development of High-Temperature Gas cooled Reactors (HTGRs), called GEMINI (www.gemini-initiative.org).

## 2 Analysis of a selection of governance schemes

The purpose of this section is to identify and analyse a number of governance schemes for technological platforms or networks, operating at European level. This section is structured by sector.

## 2.1 Energy

## 2.1.1 EMIRI – Energy Materials Industrial Research Initiative



www.emiri.eu

#### 2.1.1.1 Identification

Form: international non-profit association under Belgian law (AISBL)

#### Founded: 2012

**Scope:** industry-oriented grouping complementary to established actors, uniquely positioned to span the innovation cycle and focusing solely on advanced materials for low carbon energy & energy efficiency technologies.

Members: 60+

2.1.1.2 Governance scheme

Management bodies: Steering Committee Managing Director, reports to the SC.

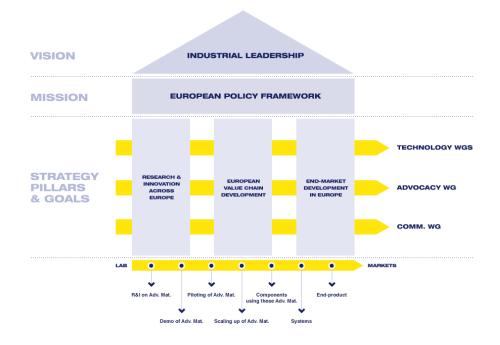
#### **Operational bodies:**

Three Working Groups:

- Technology WG
- Advocacy WG
- Communication WG

#### 2.1.1.3 Objectives and funding capacity

EMIRI's strategy encompasses the full Europe-based value chain from the lab (R&I on advanced material) to the end-market development of various low carbon energy & energy efficiency technologies through the development of strategic elements for the competitive manufacturing of advanced materials and derived products.



EMIRI has no funding capacity by itself. Members invest more than EUR 400 million annually in Research & Innovation for low-carbon energy and can mobilise several thousands of researchers and engineers (source).

## 2.1.2 FCH-JU – Fuel Cells and Hydrogen Joint Undertaking

#### 2.1.2.1 Identification

**Form:** FCH JU is the result of long-standing cooperation between representatives of industry, scientific community, public authorities, technology users and civil society in the context of the European Hydrogen and Fuel Cell Technology Platform. The Platform was launched under the 6<sup>th</sup> Framework Programme for Research (FP6) as a grouping of stakeholders, led by companies representing the entire supply chain for fuel cell and hydrogen energy technologies.

**Founded:** Established by a Council Regulation on 30 May 2008 as a public-private partnership between the European Commission, European industry and research organisations. On 6th May 2014, the Council of the European Union formally agreed to continue the Fuel Cells and Hydrogen Joint Technology Initiative under the EU Horizon 2020 Framework. The FCH 2 JU is set up for a period lasting until 31 December 2024.

**Scope:** Unique public private partnership supporting research, technological development and demonstration (RTD) activities in fuel cell and hydrogen energy technologies in Europe. Its aim is to accelerate the market introduction of these technologies, realising their potential as an instrument in achieving a carbon-lean energy system.

**Members:** public-private partnership with three members: the European Union, represented by the European Commission; the NEW Industry Grouping; and the N.ERGHY Research Grouping.

#### 2.1.2.2 Governance scheme

#### Management bodies:

For coordinating the inputs of all the members and managing the activities, the Joint Undertaking's governance structure comprises

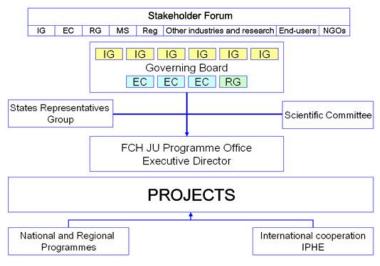
Two executive bodies:

- the Governing Board
- the Executive Director, assisted by the Programme Office (composed of about 26 staff members)

#### Operational bodies:

Three advisory bodies:

- The Scientific Committee
- The States Representatives Group
- The Stakeholder Forum



#### 2.1.2.3 Objectives and funding capacity

The FCH 2 JU shall have as strategic objective to demonstrate by 2020 fuel cell and hydrogen technologies as one of the pillars of future European energy and transport systems, making a valued contribution to the transformation to a low carbon economy by 2050.

The Executive Director is supported by the team of the Programme Office. Under the responsibility of the Executive Director, the Programme Office is in charge of the daily management of the Joint Undertaking and executes all its activities, from project management to financial matters and communication.

The key responsibilities of the Programme Office are:

- Organisation of the calls for proposals, selection of projects and management of funding;
- Management of the R&D agenda of the Joint Undertaking in coordination with members and other stakeholders;
- Communication on the Joint Undertaking and fuel cell and hydrogen technologies.

#### 2.1.2.4 Major events, strategic documents, other observations

The FCH 2 JU programme of research and innovation is structured around two research and innovation Pillars dedicated to Transportation and Energy Systems. Overarching projects integrating both transport and energy technologies and a cluster of Cross-cutting research activities complement these two Pillars.

The Transportation Pillar encompasses all aspects of hydrogen utilisation in transportation including FCEVs as well as non-road, train, maritime and aviation applications, in addition to the required Hydrogen Refuelling Station infrastructure for refuelling these vehicles and systems.

The Multi-Annual Work Plan (MAWP) was set out under the EU's new funding programme for research and innovation, Horizon 2020, for the second phase of the Fuel Cells and Hydrogen Joint Undertaking (FCH 2 JU). It outlines the scope and the objectives of the research, technological development and demonstration activities for the time frame 2014-2020.

## 2.2 Nuclear energy and research

## 2.2.1 SNETP – Sustainable Nuclear Energy Technology Platform

#### http://www.snetp.eu/

#### 2.2.1.1 Identification

Form: technology platform recognized within the SET Plan by the EC, no particular legal form

#### Founded: 2007

**Scope:** Preserve and strengthen the European technological leadership and nuclear industry through a strong and long-term Research and Development programme, involving fuel cycles and reactor systems of Generation II, III and IV types. Enhance Europe's technological leadership in nuclear science and engineering by the production of scientific and technical skills to keep pace with corresponding industrial and R&D demand. Promote advanced systems for nuclear cogeneration of heat and power.

**Members:** under consolidation by the end of 2015, around 70

#### 2.2.1.2 Governance scheme

#### Management bodies:

General Assembly gathers all members and votes on key decisions. Every second year, a meeting of the General Assembly is convened as a means to facilitate the widest involvement of interested stakeholders, providing feedback, interaction, networking and building commitment towards attaining the goals of SNETP.

SNETP is steered and monitored by a Governing Board which provides guidance on how to implement the SNETP Strategic Research & Innovation Agenda and Deployment Strategy.

The Executive Committee is responsible for the operational management of the platform and coordination of working groups.

#### Operational bodies:

The Platform is supported by a Secretariat.

Several working groups report to the Executive Committee.

#### 2.2.1.3 Objectives and funding capacity

To maintain its role as a worldwide player in the context of an increase in energy demand at global level, Europe needs an energy mix which deals with the following challenges: increase security of supply, cost competitiveness and reduction of greenhouse-gas emissions to combat climate change.

#### 2.2.1.4 Major events, strategic documents, other observations

Nuclear days – first edition was organised in 2015 and future editions are envisaged in conjunction with relevant major events.

Vision report published in 2007 is considered as basic document to be endorsed when becoming member of the platform.

Strategic Research and Innovation Agenda was updated and published in 2013.

The updated SNETP Deployment strategy will be published by the end of 2015.

Other relevant technical or informative reports and publications are available.

## 2.2.2 NUGENIA – Nuclear Generation II&III Association

#### http://www.nugenia.org/

#### 2.2.2.1 Identification

**Form:** International non-profit association according to 1921 Belgian Law, is considered one of the pillars acting under the mandate of the SNETP.

#### Founded: November 2011

**Scope:** Combining the successful action of 3 networks (SNETP TWG Gen II&III, NULIFE and SARNET), NUGENIA is set up to be the starting point of a more ambitious and united community to advance the safe, reliable and efficient operation of nuclear power plants. NUGENIA provides, in a transparent and visible way, a scientific and technical basis by initiating and supporting international R&D projects and programmes. NUGENIA contributes to innovation and facilitate implementation and dissemination of R&D results.

Members: 103 full members and 7 honorary members, the members are categorized.

#### 2.2.2.2 Governance scheme

#### Management bodies:

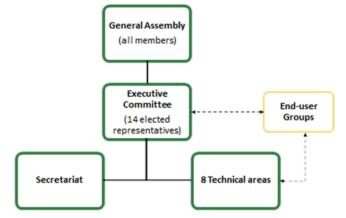
General Assembly – representing all full members and chaired by the President and Vice-President. The honorary members can participate as observers. Non-European full members cannot vote on strategic decisions regarding R&D orientations, priorities, etc.

Executive Committee – represented by 14 members, 7 coming from industry and 7 coming from R&D and academia, executes decisions of the GA and provide regular support to the association members

#### **Operational bodies:**

Secretariat – based on in-kind contribution of some members and partially subcontracted to the specialised company. It assures the day-to-day interactions and communications with the members and external actors.

Technical areas – each technical area is managed by TA leader and divided into various subareas, each with a Subarea leader. The technical area leaders have one coordinator to facilitate discussions on the cross-cutting and harmonisation issues.



#### 2.2.2.3 Objectives and funding capacity

NUGENIA is an association dedicated to the research and development of nuclear fission technologies, with a focus on Generation II and III nuclear plants. It gathers stakeholders from industry, research, safety organisations and academia, committed to develop joint R&D projects in the field. The work of NUGENIA is organised in seven technical areas, within a general scope defined by the NUGENIA Global Vision, NUGENIA Roadmap and Strategic Research Agenda published by SNETP, the European stakeholder forum for nuclear technology.

NUGENIA Association offers to its members a range of services (NOIP, Library, communication & dissemination actions) and supports the emergence of new projects.

*2.2.2.4 Major events, strategic documents, other observations* Strategic documents are Global Vision report (2015) and NUGENIA Roadmap (2014)

Annual NUGENIA Forum

Technical publications - reports, position papers, etc.

## 2.2.3 ETSON – European Technical Safety Organisations Network

#### http://www.etson.eu/

#### 2.2.3.1 Identification

**Form:** European network, non-profit association (NPA) governed by the French Law of 1<sup>st</sup> July 1901 and the Decree of 16<sup>th</sup> August 1901

**Founded:** established by May 2006 and registered as French NPA by May 2010

**Scope:** Improving harmonization of safety assessment practice in Europe

Membership: consists of members (10) and associated members (13)

#### 2.2.3.2 Governance scheme

#### Management bodies:

Board - consists of a President, two Vice-Presidents, a Secretary and a Treasurer each elected by the General Assembly for a period of two years. The Board is responsible for the preparation and execution of the General Assembly's decisions. The Board meets at least three times a year. It is convened by the President or on request of at least half of its members.

General Assembly - is composed of the member's directors or high officials.

#### **Operational bodies:**

PING is the Project Initiation Group of ETSON – to analyse the relevant markets and identify opportunities, organise and coordinate the participation of ETSON partners and to finalize the initiation process

Technical Board on Reactor Safety (TBRS) - performs a technical programme quality review function within ETSON and provides scientific assistance to the decision making process of the ETSON Board and General Assembly.

Expert groups – 14 topical expert groups to intensify the technical and scientific dialogue between the ETSON partner organizations and to organize joint projects

Knowledge Management Group (KMG) - is the information and knowledge coordination hub of ETSON

Research Group – to contribute to further definition and implementation of nuclear safety research programmes

#### 2.2.3.3 Objectives and funding capacity

European association of technical safety organisations (TSOs) that realize the technical evaluation of safety files in support of their national authorities.

#### 2.2.3.4 Major events, strategic documents, other observations

ETSON actively participates to initiatives which contributes to improve nuclear safety:

- ENSTTI training and tutoring on nuclear safety
- EUROSAFE annual forum towards convergence of technical nuclear safety practices in Europe
- ETSON Award calls to junior experts for collaborative papers
- JSP Junior Staff Programme

## 2.2.4 ENEN – European Nuclear Education Network Association

http://www.enen-assoc.org/

#### 2.2.4.1 Identification

**Form:** International non-profit association governed by the French Law of 1<sup>st</sup> July 1901 and the Decree of 16<sup>th</sup> August 1901

#### Founded: September 2003

**Scope:** The preservation and further development of expertise in the nuclear fields by higher Education and Training.

#### Members: 67

#### 2.2.4.2 Governance scheme

#### Management bodies:

Board of Governors - composed by nine ENEN members as designated and elected by the General Assembly. The Board meets at least twice a year, and is in charge of the administration and management of the ENEN Association.

General Assembly – meets annually the first Friday of March

#### **Operational bodies:**

Secretariat with Secretary General and Treasurer Working groups active within 6 working areas.

#### 2.2.4.3 Objectives and funding capacity

The general objectives of the ENEN Association are defined as follows:

With respect to the Academia:

- to develop a more harmonized approach for education in the nuclear sciences and nuclear engineering in Europe;
- to integrate European education and training in nuclear safety and radiation protection; and
- to achieve better co-operation and sharing of academic resources and capabilities at the national and international level.

With respect to the End Users, such as nuclear industries, research centers, regulatory bodies and nuclear applications:

- to create a secure basis of skills and knowledge of value to the EU;
- to maintain an adequate supply of qualified human resources for design, construction, operation and maintenance of nuclear infrastructures, industries and power plants; and
- to maintain the necessary competence and expertise for the continued safe use of nuclear energy and applications of radiation and nuclear techniques in agriculture, industry and medicine.

#### 2.2.4.4 Major events, strategic documents, other observations

European Master of Science in Nuclear Engineering (EMSNE) ENEN PhD Event & Prize

### 2.2.5 IGD-TP – Implementation Geological Disposal of Radioactive Waste Technology Platform

http://www.igdtp.eu/

#### 2.2.5.1 Identification

Form: Technology platform, no legal form or other formalized status

#### Founded: November 2009

**Scope:** After decades of bilateral and multilateral cooperation, several European radioactive waste management organisations decided, under the auspices of the European Commission, to join forces to tackle the remaining research, development and demonstration (RD&D) challenges with a view to fostering the implementation of their respective geological disposal programmes.

**Members:** more than 110 participing organisations from the EU and beyond: Waste management organisations, Academia, (Nuclear) Research Centres, Consulting companies, Industry, Technical Safety Organisations, NGOs etc.

The member organizations endorse the IGD-TP Vision report.

#### 2.2.5.2 Governance scheme

#### Management bodies:

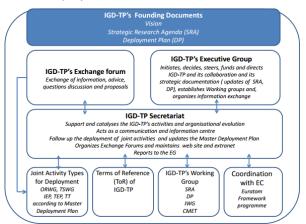
Executive Group (EG) - is the decision and management group of the platform. The technology platform is implementer-driven. Members of the EG are organisations either being responsible for implementing a waste management programme or being formally responsible for the RD&D programme needed for implementation. In addition, research organisations with significant autonomous budgets and/or available funding that can contribute to the work of the technology platform are foreseen to have an advisory role to the EG.

#### **Operational bodies:**

Secretariat – organizes, coordinates, supports activities of IGD-TP and acts as an information and communication center about activities of the IGD-TP.

Working groups – WG have specified mandates such as development of the SRA, development of supporting activities such as Competence Maintenance, Education and Training (CMET), Interface Working Group (IWG) and Nuclear Knowledge Management (NKM). The IWG will develop and follow work on how to interact with stakeholders. Cooperative projects and other forms of Joint Activities carried out in the Working Groups will follow the Executive Group's decisions and the Deployment Plan.

Regulators and Technical Safety Organisations are also invited to participate in the technology platform by forming for example mirror group(s) as decided by them. The regulator's interaction with the platform shall not compromise their independence or prejudice their decisions.



2.2.5.3 Objectives and funding capacity

In the IGD-TP's SRA, the RD&D issues identified by implementers as important to the advancement of their programmes and which are were of common interest to all or some of the IGD-TP Executive Group members and other participants, were initially grouped into seven thematic areas called Key Topics. Each Key Topic represents an area under which specific related for achieving RD&D results need to be achieved for implementing the Vision 2025. The Key Topics defined were:

- 1. Safety case,
- 2. Waste forms and their behaviour,
- 3. Technical feasibility and long-term performance of repository components,
- 4. Development strategy of the repository,
- 5. Safety of construction and operations,
- 6. Monitoring, and
- 7. Governance and Stakeholder involvement.

In addition, a number of Cross-Cutting Activities (CC) was defined: • Dialogue with regulators, • Competence maintenance, education and training, • Knowledge management (incl. information preservation, memory keeping), • Communication and other activities supporting information exchange.

2.2.5.4 Major events, strategic documents, other observations

Vision report Strategic Research Agenda Deployment Plan 2011-2016 Master Deployment Plan 2015

Annual IGD-TP Exchange Forum

## 2.2.6 MELODI – Multidisciplinary European Low Dose Initiative

http://www.melodi-online.eu/

2.2.6.1 Identification and members

**Form:** European platform, association governed by French law of 1<sup>st</sup> July 1901

Founded: 2010

Scope: Low dose radiation risk research

Members: 29

2.2.6.2 Governance scheme

#### Management bodies:

A General Assembly is held once a year, together with an open MELODI workshop. The Board of Directors of MELODI defines the main strategies for the Association. The Bureau of MELODI is elected for a period of three years.



#### **Operational bodies:**

Members of the Bureau – President, Vice-President, Secretary, Vice Secretary and Treasurer

#### 2.2.6.3 Objectives and funding capacity

The purpose of MELODI is to coordinate and promote European research on the risks associated with low dose exposure to ionizing radiation. MELODI is a research platform, in accordance with relevant EU policies. In this context, it contributes to the definition of priority objectives in low dose risk research, identification of research programmes and resources to be implemented in order to achieve these objectives, assessment of results obtained, and promotion of communication on these issues between the various parties involved.

The funding capacity of MELODI platform is represented by 3 EU funded projects that allow within the project framework to organize competitive calls for projects:

- DoReMi calls in 2011 and 2012
- OPERRA calls in 2013 and 2014
- CONCERT European Joint Programme for the integration of radiation protection research, launched in 2015

#### 2.2.6.4 Major events, strategic documents, other observations

- The scientific foundation for MELODI is the Strategic Research Agenda (SRA).
- Annual General assembly and workshop

## 2.2.7 EERA-JPNM – European Energy Research Alliance – Joint Programme Nuclear Materials

#### http://www.eera-jpnm.eu/

#### 2.2.7.1 Identification

**Form:** EERA is an international non-profit association governed by Belgian Law managing 16 Joint Programmes among which JPNM

Founded: EERA launched in October 2008 and formally established as association in 2014

**Scope:** The integration of nuclear materials research is necessary to optimise the use of the available human and financial resources, as well as facilities and expertise, with the goal of solving the future energy needs, but it requires sufficient support and engagement of the European Commission and Member States.

Members: 17 Participants and 23 Associates

2.2.7.2 Governance scheme Management bodies: JPNM Management Board

Operational bodies: JPNM Steering Committee Sub-programmes

#### 2.2.7.3 Objectives and funding capacity

An EERA Joint Programme is created by interested organisations that define a joint research agenda for a topic included in the SET-Plan. The EERA JPs coordinates research based on the participating institutions own resources. In addition the JP can obtain supplementary funding from national or EU sources. The aim is to gradually increase the amount of dedicated funding to the JPs. This will allow a JP to widen and deepen coordination.

The objective of the EERA JP on Nuclear Materials is to improve safety and sustainability of Nuclear Energy by focusing on materials aspects:

- Better knowledge of materials behaviour under operating conditions, seeking predictive capability, to select the most suited materials and define safe design rules, especially allowing for radiation and temperature effects, while caring for compatibility with coolants.
- Development of innovative materials with superior capabilities, resistant to high temperature and aggressive environments.

#### 2.2.7.4 Major events, strategic documents, other observations

6 technical sub-programmes

## 2.2.8 FALCON – Foster ALfred CONstruction

#### http://www.alfred-reactor.eu/

#### 2.2.8.1 Identification

**Form:** International Consortium based on Memorandum on hosting the demonstrator approved by Romanian Government (2011), signature of the ALFRED Memorandum of Understanding (MoU) between Ansaldo, ICN and ENEA (2012), the Consortium Agreement between Ansaldo, INR and ENEA (2013).

FALCON is planned to evolve from an unincorporated consortium (phase 1, presently ongoing) towards a non-profit legal entity (phase 2) responsible for the commitment of the ALFRED construction and operation.

#### Founded: 2012

**Scope:** Consortium representing the first step towards the construction of a demonstrator for the Generation IV liquid lead-cooled nuclear fast reactor in Romania.

**Members**: full members signed the Consortium statute (Ansaldo, INR, ENEA and CVR), associate partners (6 organisations) joined the consortium by signing the MoA, and 4 organisations are finalizing the signature procedure

#### 2.2.8.2 Governance scheme

#### Management bodies:

Steering Committee - with one representative appointed by each partner, is set to supervise the activities of all participants

Management Group - made of members being represented in the main EU and international platforms where innovative nuclear energy systems are discussed (like GIF, SNETP and ESNII), is set to lead the strategy for the LFR development.

#### **Operational bodies:**

Technical Group - made of senior technical experts, to define the best technological approaches and to find engineered solutions in order to speed up the realization of ALFRED.

#### 2.2.8.3 Objectives and funding capacity

The Consortium will be extended to include other European organizations that have already expressed their interest. It will use an 'in kind' mechanisms in order to procure the resources needed to complete the first technology development and design phase. The consortium aims to obtain funding for the reactor construction phase through EU resources allocated to R&D infrastructure (structural or cohesion funds) in new member states, as well as loans from the European Investment Bank.

The Phase one is partially funded through ARCADIA, an EU project launched in 2013.

#### 2.2.8.4 Major events, strategic documents, other observations

In June 2013 the Italian vice-Minister for the Economic Development, Claudio De Vincenti, wrote the endorsement letter to the European Commissioner for Energy Gunther Oettinger.

## 2.2.9 ALLEGRO – V4G4 Centre of Excellence

#### 2.2.9.1 Identification

Form: Association governed by Slovakian law

Founded: Preparatory work since 2010, the Association was established in 2013

**Scope:** Allegro preparatory phase covers the pre-conceptual design, safety & licencing issues, R&D and governance & financing issues

**Members:** UJV (Czech Republic), MTA-EK (Hungary), NCBJ (Poland) and VUJE (Slovak Republic) with CEA (France) as associate

2.2.9.2 Governance scheme

Management bodies:

n/a

**Operational bodies:** 

n/a

#### 2.2.9.3 Objectives and funding capacity

The support of the current fleet and more particularly the extension of their life operation with the highest level of safety remains the first priority for nuclear research organizations like the 4 founding members of the V4G4 Centre of Excellence. To prepare the future their main objective is the development of the 4th generation of nuclear reactors based on fast neutrons. This new generation of nuclear reactors will meet the objective of a sustainable nuclear energy, based on the highest safety standards.

The R&D activities were or are partially funded by ALLIANCE, VINCO, and ESNII+ projects.

2.2.9.4 Major events, strategic documents, other observations

ALLEGRO Roadmap - Roadmap of the European gas cooled demonstration reactor ALLEGRO project following the recommendation of the V4G4 Steering Committee

ALLEGRO Research Centre in Slovakia - 2014 was a starting point of the ALLEGRO Research Centre Project in Slovakia. In that time the contract between Ministry of Education, Science, Research and Sport of the Slovak Republic (Ministry of Education) and Slovak Academy of Sciences was signed. Project is financed from EC Structural Funds.

## 2.3 Environment

## 2.3.1 JPI OCEANS – Joint Programming Initiative Healthy and Productive Seas and Oceans

#### http://www.jpi-oceans.eu/about

#### 2.3.1.1 Identification

**Form:** Joint Programming Initiative (Joint programming is a concept introduced by the European Commission in July 2008 and is one of the initiatives aimed at implementing the European Research Area (ERA). The concept intends to tackle the challenges that cannot be solved solely at national level and allows Member States and Associated Countries to participate in those joint programming initiatives where it seems useful for them.)

#### Founded: 2011

**Scope:** Coordinating and integrating strategic platform, open to all EU Member States and Associated Countries who invest in marine and maritime research. JPI Oceans covers all European sea basins with 21 participating countries which provide a long-term integrated approach to marine and maritime research and technology development in Europe.

#### Members: 21

#### 2.3.1.2 Governance scheme

#### Management bodies:

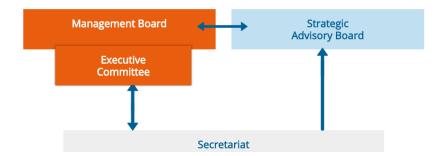
Run by a high-level Management Board (MB) with representatives from each country with sufficient authority to agree on joint action plans and potential funding initiatives across Europe.

The Management Board mandates an Executive Committee (ExCom) to execute its decisions and to supervise the JPI activities.

#### **Operational bodies:**

The Management Board also put in place a Strategic Advisory Board (StAB) consisting of leading scientists, technologists/industrialists and representatives of civil society. They have been tasked with the development of a strategic research and innovation agenda and with providing advice on necessary implementation tools.

The secretariat is responsible for the day-to-day management of JPI Oceans. The secretariat assists the Management Board, the Executive Committee and the Strategic Advisory Board with the preparation of documents, reviews and reports. In addition the secretariat ensures the necessary logistical coordination and communication among different bodies of the management structure and additional working groups.



#### 2.3.1.3 Objectives and funding capacity

JPI Oceans will focus 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.

#### 2.3.1.4 Major events, strategic documents, other observations

The Strategic Research and Innovation Agenda (SRIA) of JPI Oceans was published in May 2015 and presented at the First JPI Oceans conference.

Actions within the Strategic Areas will vary in size, scope and duration. Specific actions in the cross-cutting fields of research infrastructures, science-policy interactions, and human capacity building are also identified as being necessary to address the overall vision.

The Management Board of JPI Oceans is currently discussing which actions will be taken forward in the first phase of implementation. These activities will be published in an Operational Plan.

## 2.4 **Processing industry**

## 2.4.1 A.SPIRE

#### 2.4.1.1 Identification

**Form:** A.SPIRE is an international nonprofit association (aisbl). The Sustainable Process Industry through Resource and Energy Efficiency (SPIRE) is a contractual public-private partnership (PPP) between the European Commission and A.SPIRE aisbl. It has been established under the EU framework programme Horizon 2020.

The contractual arrangement specifies (SPIRE, 2013):

- The objectives of the partnership
- The indicative budget provided by the EC for the whole Horizon 2020, which has been formalized via work programme
- Respective commitments of the partners
- Monitoring and review mechanism using key performance indicators
- Outputs to be delivered.

The contractual arrangement has the legal nature of a Memorandum of Understanding. The SPIRE PPP is then implemented through competitive calls included in the normal research and innovation work programmes and with the rules for participation of Horizon 2020.

**Founded:** In July 2012, A.SPIRE aisbl was established during a signing ceremony in Brussels. SPIRE PPP was launched in December 2013 with the official signature of the Memorandum of Understanding between the EC and the A.SPIRE association (SPIRE2030, 2013).

**Scope:** SPIRE brings together eight sectors of the process industry: chemicals, cement, ceramics, minerals, steel, non-ferrous metals, industrial water and process engineering.

**Members:** More than 130 organisations from over a dozen countries in Europe are members of SPIRE. These members are industries, research organisations, associations, associate and work in one or more of the eight sectors included in SPIRE.

#### 2.4.1.2 Governance scheme

#### Management bodies:

<u>A.SPIRE</u> is a European Association which committed to manage and implement the SPIRE PPP. The private side must provide evidence of fulfilling its commitment to the objective of the partnership, in particular concerning proposed investments.

A <u>Partnership Board</u> (SPIRE, 2013) was established between the EC and A.SPIRE as the main mechanism for dialogue. The Partnership Board has specific Terms of Reference. A.SPIRE nominates their representatives to be then endorsed by the Commission. The Commission services which provide financial support to the SPIRE PPP have also representatives in the Partnership Board. The objective of this Board is to evaluate the progress within SPIRE PPP and possibly improve mutual collaboration.

#### Operational bodies:

n/a

#### 2.4.1.3 Objectives and funding capacity

The objective of SPIRE is to integrate, demonstrate and validate systems and technologies capable of achieving two key resource and energy efficiency targets:

- A reduction in fossil energy intensity of up to 30% compared to current level in 2030
- A reduction of up to 20% in non-renewable, primary raw material intensity compared to current levels in 2030.

These targets set by SPIRE will support a shift to a more sustainable and growing European economy with the creation of jobs and progress in clean industrial technologies.

The total budget provided by the EC is €900 million over the seven year period of Horizon 2020. A matching contribution will be provided by the private stakeholders of the initiative (European Commission, 2013).

#### 2.4.1.4 Major events, strategic documents, other observations

SPIRE released a research and innovation roadmap representing a coordinated and integrated framework from research to business following a staged approach with short-term, medium-term and long-term objectives and benefits.

## 2.4.2 SusChem

#### http://www.suschem.org/

#### 2.4.2.1 Identification

**Form:** SusChem is a European Technology Platform which promotes and work for a more Sustainable Chemistry. A European Technology Platform is an industry-led stakeholder organization which develops long-term research and innovation agendas for action at European and national level. It is supported by both private and public funding.

**Founded:** It was founded in 2004 as a joint initiative between existing organisations: Cefic, DECHEMA, EuropaBio, GDCh, ESAB and RSC.

**Scope:** SusChem supports R&D and innovation to develop more sustainable chemistry and biotechnologies. They identified 6 priority-areas:

- Resource and energy efficiency
- Water
- Raw materials
- Smart cities
- Enabling technologies
- Education

**Members:** SusChem brings together industry, academia and governmental policy groups. Everyone who is interested in SusChem activities can become a SusChem member by filling out the registration form available on SusChem website. Registration is free of charge.

#### 2.4.2.2 Governance scheme

#### Management bodies:

The main governance body is the <u>SusChem Board</u> which manages the overall strategy of SusChem and its activities. The activities of the board are supported by the <u>SusChem Management Team</u> which is responsible for the implementation of SusChem strategy.

#### **Operational bodies:**

The <u>SusChem secretariat</u> provides support to the board and the management team for day-to-day activities. It is based at Cefic.

SusChem has also established a network of <u>National Technology Platforms</u> in 11 countries across Europe. These National Platforms work on sustainable chemistry initiatives within their own country, support national engagement in EU collaborative projects and programmes and contribute to transnational collaborations.

In addition, several <u>working groups</u> are organized in order bring together specialists on defined themes, covering technology areas, innovation programmes and education and skills.

#### 2.4.2.3 Objectives and funding capacity

The mission of SusChem is to initiate and inspire European chemical and biochemical innovation in order to respond effectively to society's challenges by providing sustainable solutions.

SusChem activities have been funding by European framework programme (FP6 and FP7). SusChem is now supported by the Horizon 2020 programme.

#### 2.4.2.4 Major events, strategic documents, other observations

In March 2015, SusChem released its Strategic Innovation and Research Agenda to present its strategy and highlight a portfolio of sustainable chemistry research and innovation actions that the platform believes can make a significant contribution to improving competitiveness and sustainability.

## 2.4.3 ULCOS

#### http://www.ulcos.org/en/

#### 2.4.3.1 Identification

**Form:** ULCOS (Ultra-Low CO2 Steelmaking) is a consortium of 48 European companies and organisations that have launched a cooperative research & development initiative to enable drastic reduction in Carbon dioxide (CO2) emissions from steel production.

Founded: Following the Kyoto protocol ULCOS was launched in 2004.

**Scope:** The ULCOS programme includes expertise from steelmaking to biomass production and geological carbon dioxide storage. It covers process science as well as engineering, economics of energy and studies in relation to climate change.

**Members:** ULCOS gathers 48 European companies and organizations from 15 countries in Europe. These organizations include EU steel companies, energy and engineering partners and research institutes and universities.

#### 2.4.3.2 Governance scheme

**Management bodies:** The project is coordinated by ArcelorMittal and run by a small number of partners called the <u>core members</u>.

#### **Operational bodies:**

n/a

#### 2.4.3.3 Objectives and funding capacity

The objective of ULCOS is to reduce the emissions of carbon dioxide of today's best routes for the production of steel by at least 50%.

The budget reached  $\in$ 75 million over a 6 year period. It was financed by ULCOS partners, paying 60% of the bill; the remaining 40% was covered by the European Commission through the 6<sup>th</sup> framework programme (FP6).

#### 2.4.3.4 Major events, strategic documents, other observations

The programme ULCOS I was financed for a period of 6 years and covered research and pilot phase from 2004 to 2010. The demonstration phase was supposed to run between 2010 and 2015 but was not financed.

## 2.5 Smartcities

## 2.5.1 EIP-SCC

#### https://eu-smartcities.eu/

#### 2.5.1.1 Identification

**Form:** The European Innovation Partnership on Smart Cities and Communities (EIP-SCC) is an initiative supported by the European Commission.

Founded: The EIP-SCC was launched in July 2012.

**Scope:** The main objective is to establish strategic partnerships between industry and European cities to develop the urban systems and infrastructures of tomorrow. The main activities of the EIP-SCC cover:

- The development and the implementation of integrated smart city solutions
- Networking, accumulation of knowledge and exchange of information
- Studies on the intersection of Energy, ICT and Transport

**Members:** The EIP-SCC brings together cities, industries, SMEs, banks, research and other smart city actors. Registration is free of charge and only requires to fill a registration form.

#### 2.5.1.2 Governance scheme

#### Management bodies:

A <u>High Level Group</u>, supported by a Sherpa Group is responsible for the Strategic Implementation Plan.

#### Operational bodies:

6 <u>Action clusters</u> study specific issues related to smart cities. They explore new fields of activities and business models.

#### 2.5.1.3 Objectives and funding capacity

The objective of the platform are to:

- Improve citizens' quality of life
- Increase competitiveness of Europe's industry and innovative SMEs
- Make cities more competitive and better places to live in
- Share knowledge to prevent mistakes being repeated
- Reach European energy and climate targets
- Support organisations in finding the right partners and solutions to achieve social, environmental and economic sustainability in cities

The partnership has a budget of €365 million which includes the transport and ICT sectors.

#### 2.5.1.4 Major events, strategic documents, other observations

The EIP-SCC released in 2013 the Strategic Implementation Plan and the Operational Implementation Plan.

### 2.5.2 Future city Glasgow

#### 2.5.2.1 Identification

**Form:** The city of Glasgow will build four demonstrators linked to future cities technologies. This project results from an initiative organised by the UK government called catapult.

**Founded:** Glasgow was declared winner of the competition which gathered 30 cities at the beginning of 2013.

**Scope:** The project comprises four demonstrators:

- The Active Travel Demonstrator to show how a city can be friendlier for both cyclists and pedestrians
- The Energy Efficiency Demonstrator to obtain and use information in order to cut emissions, reduce overheads and address issues of fuel poverty
- The Integrated Social Transport Demonstrator for citizens to access social and educational services.
- The intelligent Street Lighting Demonstrator to show how the city can use smarter streetlights to improve lighting quality, reduce energy usage and make maintenance more efficient.

**Members:** The proposal was produced by Glasgow City Council Development & Regeneration Services (DRS) and Land & Environmental Services (LES) in association with the University of Strathclyde, ACCESS and IBI Group.

#### 2.5.2.2 Governance scheme

#### Management bodies:

#### **Operational bodies:**

The operational bodies are described in the figure below:

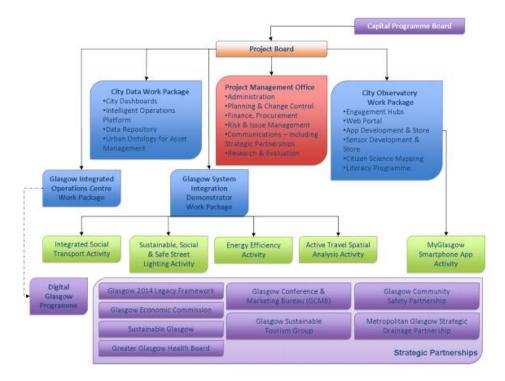


Figure: Operational structure of the Future City Glasgow project

#### 2.5.2.3 Objectives and funding capacity

The objective of the project is to use in smart ways the huge amount of data generated by both cities and citizens to make life better in cities. The project will explore different solutions in various sectors: transport, energy, lighting, education, etc.

The budget is £24 million and is provided by the UK government. The grant was offered by the Technology Strategy Board (TSB), a body set up by the government in 2007 to stimulate technology-enabled innovation.

#### 2.5.2.4 Major events, strategic documents, other observations

The project has just started so no strategic document has been released yet. However, the city of Glasgow built its proposal on a vision document called "Future Glasgow 2011-2061: a fifty year vision for the future".

## 2.6 Transport

## 2.6.1 ERTRAC – European Transport Research Advisory Council

http://www.ertrac.org/index.php?page=what-is-ertrac

#### 2.6.1.1 Identification

**Form:** no particular legal form, the Technological platform is supported by EC project

#### Founded: 2009

**Scope:** Because of the importance of the role of Road Transport in Europe, an accelerated development of sustainable, integrated transport solutions is necessary. The mission of ERTRAC is to provide a framework to focus the coordinated efforts of public and private resources on the necessary research activities.

**Members:** Associations & companies, academia, European Commission, European MS and Associated countries, Observers

#### 2.6.1.2 Governance scheme

#### Management bodies:

ERTRAC Plenary - The ERTRAC Plenary gathers all the ERTRAC members three times a year. The plenary is responsible for defining the strategic orientations of ERTRAC, and to enable a shared vision from all the Road Transport stakeholders. The Plenary adopts the ERTRAC documents, and decides on the strategic approaches for the technology platform.

ERTRAC Executive Group - The ERTRAC Executive Group is formed by the Chairman and the Vice-Chairmen. It is responsible for the daily decision-making of the technology platform and takes all necessary decisions for its functioning in between the Plenary and Steering Group meetings. The members of the Executive Group represent ERTRAC in public events and consultation bodies. They chair the Plenary meetings.

#### Operational bodies:

ERTRAC Working Groups - consist of experts from the ERTRAC members. The ERTRAC documents are prepared within the Working Groups. They include Scenarios, the Strategic Research Agenda and the research roadmaps. There are currently five working groups.

The ERTRAC Secretariat is responsible for the daily management of the technology platform, such as the organisation of meetings and communication activities. It reports directly to the Executive Group, and assists all the bodies of ERTRAC.

The ERTRAC Supporting Institutions Group (ERTRAC SIG) is a non-profit association, legally established in Belgium (AISBL), supporting ERTRAC by financing its activities (office, secretariat costs, meetings and events costs, etc.).

#### 2.6.1.3 Objectives and funding capacity

The road transport sector involves a wide range of industries and services from vehicle manufacturers and suppliers to infrastructure providers, mobility management, communication technologies, energy companies,

and many others. Road transport, integrated with the other modes of transport, enables mobility for people and goods across Europe.

2.6.1.4 Major events, strategic documents, other observations ERTRAC Road Transport Scenario 2030+, Technical Document and Executive Summary, October 2009 ERTRAC Strategic Research Agenda + Technical document, October 2010 ERTRAC MAP for Horizon 2020, March 2013

## 2.6.2 ERRAC – the European Rail Research Advisory Council

http://www.errac.org/

*2.6.2.1 Identification* **Form:** European Technology Platform, no legal form

#### Founded: 2001

**Scope:** ERRAC was set up in 2001 with the ambitious goal of creating a single European body with both the competence and capability to help revitalise the European rail sector and make it more competitive, by fostering increased innovation and guiding research efforts at European level. ERRAC covers all forms of rail transport: from conventional, high speed and freight applications to urban and regional services.

**Members:** 13 rail stakeholder associations and their members, in total ERRAC comprises of 45 representatives from each of the major European rail research stakeholders: manufacturers, operators, infrastructure managers, the European Commission, EU Member States, academics and users' groups.

#### 2.6.2.2 Governance scheme

#### Management bodies:

The Plenary comprises of the ERRAC members plus invited members of Academia and research institutions, Member States and the European Commission.

The Strategic Board is in charge of approving and monitoring the proper implementation of ERRAC strategy.

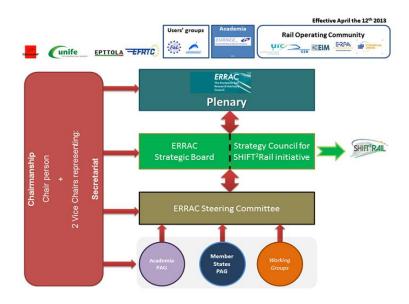
#### Operational bodies:

The Steering Committee is the body responsible for the operational management of ERRAC activities. In addition, the Steering Committee oversees the creation, composition and operation of any ERRAC Working Groups and Permanent Advisory Groups established for the effective and collaborative working of ERRAC.

2 Permanent Advisory Groups (PAGs), 1 for academia and research institutions and 1 for representatives from the Member States. These PAGs are largely autonomous but shall report all their activities and decisions to the Steering Committee. The Steering Committee may decide to set up Working Groups that are able to focus on specific issues or activities.

The appointment of the Chair and the 2 Vice Chairs is endorsed by the ERRAC Plenary based upon a proposal of the Steering Committee.

Secretariat composed from the secretary, nominated following the same rotating process as the ERRAC Chairmanship (i.e. alternating between the ROC and the rail manufacturing industry) such that the Chair and the Secretary do not come from the same associations and a two-person team, drawn from rail operating community and the rail manufacturing industry.



#### 2.6.2.3 Objectives and funding capacity

'RailRoute 2050' offers a range of research opportunities for a competitive, resource-efficient and intelligent rail transport system that meets the future demands of European citizens, stipulates economic growth, creates European jobs, and strengthens the position of the European rail sector in global competition. The European vision for railway research and innovation outlined in 'Railroute 2050' illustrates the research pillars that need to be supplemented by the corresponding investment pillar.

#### 2.6.2.4 Major events, strategic documents, other observations

Joint Strategy for European rail Research – Vision 2020, the SRRA – Strategic Rail Research Agenda and its 2007 updated version, Suburban and Regional Railways Landscape in Europe, Light Rail and Metro Systems in Europe, Rail Research in Europe, a comparison of the Member States public research programmes with the ERRAC SRRA

In 2012, ERRAC released an initial update of the ERRAC vision for the future of rail, Railroute 2050, projecting it to 2050, addressing the European effort required for research and innovation especially to meet the objectives of the European Commission 2011 Transport White paper "Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system".

## 2.6.3 SESAR – High performing aviation for Europe

#### http://www.sesarju.eu/

#### 2.6.3.1 Identification

**Form:** Joint Undertaking created under European Union law with Eurocontrol and the European Union as founding members

#### Founded: February 2007

**Scope:** SESAR unites around 3,000 experts in Europe and beyond in an effort to make the SES a timely reality by developing technologies and procedures for a new-generation of the ATM system capable of enhancing performance.

**Members**: SESAR unites the whole aviation community through its 16 members. Several members are made up of consortia - and together with their affiliates and sub-contractors - represent a total of 70 organisations actively participating in and demonstrating the impact of the SESAR programme on ATM R&D activities in Europe.

#### 2.6.3.2 Governance scheme

#### Management bodies:

The governance of the SESAR Joint Undertaking is ensured by the Administrative Board and the Executive Director

#### **Operational bodies:**

Permanent participants – Executive Director, Deputy ED, Chief Administration Affairs, Accounting Officer, Internal Audit and Secretary of the Board

#### 2.6.3.3 Objectives and funding capacity

The total estimated cost of the development phase of SESAR is € 2.1 billion, to be divided equally between the European Union, Eurocontrol and the industry. Given the nature of the programme and its scope the Community contribution will come from Research and Trans-European Network funds.



#### 2.6.3.4 Major events, strategic documents, other observations

The European ATM Master plan is SESAR's roadmap for driving the European ATM modernisation programme.

Approved in late 2012, the updated European ATM Master Plan provides a revised roadmap for deployment of the SES AND is the first significant update of the Master Plan. It sets out the following aims:

- To prepare for the SESAR deployment phase
- To promote and ensure global interoperability, in particular with the US NextGen ATM modernisation programme
- To promote synchronisation of ATM research and development, and deployment, to ensure global interoperability
- To update the standardisation and regulatory roadmaps.

## 2.7 Health

## 2.7.1 ETPN

http://www.etp-nanomedicine.eu

#### 2.7.1.1 Identification

Form: European Technology Platform

#### Founded: 2005

**Scope:** The European Technology Platform for Nanomedicine (ETPN), an initiative led by industry since 2005 and set up together with the European Commission, to address the application of nanotechnology in healthcare.

#### Members: 145

#### 2.7.1.2 Governance scheme

#### Management bodies:

The Executive Board of the ETP Nanomedicine consists of the Chairs and Vice-Chairs of the Working Groups, Advisory Groups, Mirror Group, of the Secretary General and of the ETPN Chair and Vice-chair person.

#### Operational bodies:

The work of the platform is supported by the Secretariat of the ETP Nanomedicine.

A set of Working Groups (WG) and Advisory Groups (AG) has been set up according to the ETP Nanomedicine priority areas.

#### 2.7.1.3 Objectives and funding capacity

#### The objectives are to:

- Establish a clear strategic vision in the area resulting in a Strategic Research Agenda
- Decrease fragmentation in nano-medical research
- Mobilise additional public and private investment
- Identify priority areas
- Boost innovation in nanobiotechnologies for medical use

ETPN members pay annual membership fees, according to the types of their organization.

#### 2.7.1.4 Major events, strategic documents, other observations

A Vision document is written for this highly future-oriented area of nanotechnology-based healthcare in which experts describe an extrapolation of needs and possibilities until 2020.

In addition, a number of strategic documents show a well elaborated common European way of working together for the healthcare of the future trying to match the high expectations that nanomedicine has raised so far.

The ETPN releases on regular basis an online-based Newsletter compiling nanomedicine related news of interest for its members but also for the community at large.

## 2.8 ICT

## 2.8.1 ARTEMIS-IA

#### https://artemis-ia.eu/

#### 2.8.1.1 Identification

**Form:** association, non-profit organisation The association has its registered office at Eindhoven, The Netherlands

#### Founded: January 2007

**Scope:** ARTEMIS Industry Association is the association for actors in Embedded & Cyber-Physical Systems within Europe. ARTEMIS IA continuously promotes the R&I interests of its members to the European Commission and the Public Authorities of the participating states. It continues the work of the European Technology Platform ARTEMIS

**Members:** 180

#### 2.8.1.2 Governance scheme

#### Management bodies:

The General Assembly is composed of each member of ARTEMIS-IA.

The Steering Board is constituted by a maximum of 25 natural persons and its members are appointed by the General Assembly.

The Presidium, composed of one president and 4 vice-presidents, is elected by the Steering Board.

#### **Operational bodies:**

- Secretary General is appointed by the Presidium and is in charge of handling the day-to-day affairs of the association
- ARTEMIS-IA office is headed by the Office Director

#### 2.8.1.3 Objectives and funding capacity

The association aims:

- to be a European Technology Platform (ETP) on Embedded & Cyber-Physical Systems
- to be one of the partners of ECSEL Joint Undertaking

ARTEMIS Industry Association members pay a fixed Membership Fee, as well as a Variable Fee for projects they participate in.

#### 2.8.1.4 Major events, strategic documents, other observations

Various events are organised and took place:

- ARTEMIS Technology Conference 2015, 06-07 October 2015, Turin, Italy
- ARTEMIS Summer Camp 2015, 10-11 June 2015, Helsinki, Finland
- ARTEMIS Brokerage Event for Call 2015, 21-22 January 2015, Amsterdam, Netherlands

ARTEMIS IA is responsible for the ARTEMIS Strategic Research Agenda (SRA) on Embedded & Cyber-Physical Systems.

## 2.8.2 EPoSS

http://www.smart-systems-integration.org/

#### 2.8.2.1 Identification

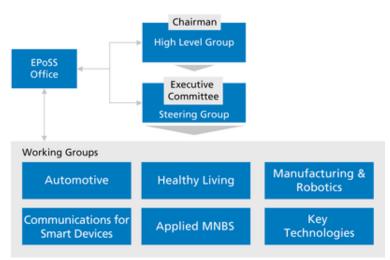
Form: EPoSS Association, is a non-profit association according to German law.

#### Founded: September 2013

**Scope:** The European Technology Platform on Smart Systems Integration (EPoSS) is an industry-driven policy initiative, defining R&D and innovation needs as well as policy requirements related to Smart Systems Integration and integrated Micro- and Nanosystems.

#### Members: 40

2.8.2.2 Governance scheme Management bodies:



The High Level Group (HLG) is guiding the overall strategic development of the Technology Platform. The HLG consists of the Chairperson of EPoSS, who also chairs the HLG, and the Vice-Chairpersons. The members of the HLG are senior industry representatives. The HLG provides the link to the European Commission and to other thematically related European Technology Platforms.

#### **Operational bodies:**

The Steering Group deals with all strategic and cross-sectorial issues.

The Chairperson of the EPoSS Steering Group is at the same time the Chairperson of the Executive Committee.

The chairpersons of the EPoSS Working Groups form the Executive Committee of EPoSS, which is chaired by a particularly dedicated industry representative, the Chairperson of the Executive Committee. The work of the platform is supported by the EPoSS Office.

## 2.8.2.3 Objectives and funding capacity

EPoSS embraces all key players, public and private, in the value chain so as to:

- provide a common European approach on Innovative Smart Systems Integration from research to production outlining the key issues for a strategic European innovation process,
- define priorities for common research and innovation in the future,
- formulate commonly agreed road maps for action (updating, assembling and completing existing material and approaches) and provide a strategic R&D agenda, and

• mobilise public and private human, infrastructural and financial resources.

The EPoSS Association has four categories of members, and the affiliation to the member category determines the membership fee.

#### 2.8.2.4 Major events, strategic documents, other observations

The EPoSS Annual Forum took place for the second time as a joint event with the MNBS Consultation and Concertation Workshop on Micro-Nano-Bio Convergence Systems. The event was held in Leuven, Belgium, on 12-15 October 2015.

EPoSS develops Vision papers and set-up a Strategic Research Agenda on Innovative Smart Systems Integration.

EPoSS also releases regular Newsletters and publications.

## 2.8.3 NESSI

#### http://www.nessi-europe.eu/

#### 2.8.3.1 Identification

Form: European Technology Platform

Founded: September 2005

**Scope:** NESSI, the Networked Software and Services Initiative, a European Technology Platform, for new Digital Information Society and Economy powered by software, services and data

#### Members: 450

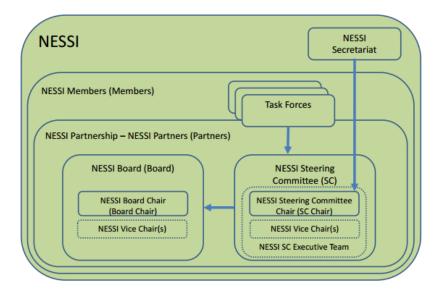
#### 2.8.3.2 Governance scheme

The initiative on Networked European Software & Services (NESSI) is based on the following principle:

#### Industry-driven open participation

The governance structure guarantees this principle. It ensures that direction is set by industry and that participation is open to all interested parties.

#### Management bodies:



#### NESSI Board

The NESSI Board (referred to as "Board") is the NESSI governance body with the ultimate level of authority with the necessary delegated authority from the Partners. The Board's authority shall not conflict with nor exceed the provisions in this governance document. It is led by the Board Chair.

The Board consists of empowered representatives from all Partners and shall be a representative and fair mix of the following communities whilst maintaining that NESSI is industry led:

- Large ICT industry (i.e. non-SMEs)
- SME ICT Industry
- Academic & Research Community

#### NESSI Steering Committee

The NESSI Steering Committee (referred to as "SC" or "Steering Committee") is the main operational authority of NESSI by delegation of the Board. It is led by the NESSI Steering Committee Chair.

The composition of member organisation/natural person of the SC is the same as the Board although the physical person representing member organisation/natural person should generally be different than the one in the board.

#### **Operational bodies:**

#### Task Forces

NESSI uses a structure of Task Forces to perform specific tasks, notably:

- Building and developing a complete Research Agenda
- Liaising with established research activities contributing to the NESSI vision
- Gathering input from the NESSI membership or specific industry segments

• Contributing to documents promoting NESSI, its activities, its vision and strategy (ie White papers, presentations,...).

• Defining and executing specific activities as defined by the Steering Committee or Board

These Task Forces are created by the NESSI Steering Committee and expire upon the accomplishment of their Task.

#### NESSI Secretariat

The NESSI Secretariat (referred to as "Office" or "Secretariat") provides organisational and operational assistance to the NESSI groups especially the Board and the Steering Committee.

The Secretariat is typically external to the Partners and decided by the Board after recommendation by the Steering Committee.

The role of the Secretariat includes:

• To provide organisational, secretarial, and operational support to the Steering Committee and the

Board as required for organising meetings; preparing agendas and minutes; receiving, publishing and distributing documents

- To act as an information and communication centre for NESSI, including the maintenance and updating of its dedicated website
- To provide/coordinate IT support to NESSI, allowing the platform and its bodies to make efficient use of electronic communication, information exchange and document handling
- To edit White papers and Position Papers
- To submitting justification and plans for its activities
- To organise Conferences/ Events
- To approve Member applications according to the governance rules and raise applicant issues to the SC Chair

#### NESSI partners

A NESSI Partner is a NESSI Member who has been selected by the NESSI Board to be a member of the NESSI Board and the NESSI Steering Committee.

The role of Partners in NESSI is significant in terms of the mandated regular attendance of the NESSI Board / Steering Committee meeting and associated activity as well as leading specific Task Force activity. In addition to this; part of Partners' role is to pay Partner fees decided by the NESSI Board.

#### 2.8.3.3 Objectives and funding capacity

NESSI promotes that software, services, and data are key enablers to help resolve European societal and economic challenges across all sectors, both private and public, such as manufacturing, transportation, energy, and healthcare.

NESSI's first objective is to engage with European (ICT) Industry and to promote the need for dramatic changes due to new ICT eco-systems and innovations which are a pre-requisite for Europe to stay competitive globally. Innovation will take place in infrastructure, software, platforms, products, services, processes and information. Individual technologies will advance in areas such as servicification of products, platforms interoperability, real-time data analytics, Software-as-a-Service (SaaS) and virtualisation and these will all be supported by new advanced innovative software engineering techniques and tools.

Membership is free and open to organisations that meet the following criteria:

- being a legally established corporation, individual firm, partnership, university or research institution (further referred to as organization);
- having a legal presence in the European Union member states or associated countries for a purpose other than sale, distribution, or maintenance of products engineered and manufactured outside of the European Union;
- making a statement of support for the mission and vision of NESSI through a provided Letter of Intent; and
- belonging to one of the following four categories: ICT SME (in accordance with EC rules on SME definition), ICT Large, Academic & Research, Users

#### 2.8.3.4 Major events, strategic documents, other observations

NESSI releases NESSI Newsletters, NESSI Position Papers and NESSI Strategic Research and Innovation Agenda

## **3** Synthesis of elements & recommendations for NC2I

## 3.1 NC2I governance today

NC2I is today a pillar of the SNETP. It is governed by a Task Force (10 members) which elects one Chair and 2 Vice-chairs.

The running of the Task force is supported by the SNETP Secretariat.

The interface with international counterparts is done within the Task Force meeting. The interactions with Members States interested in the NC2I objectives takes place on a case-by-case bilateral basis.

Considerations on a potential evolution towards a legal entity are explained in a different NC2I-R deliverable.

## 3.2 Possible evolutions of the NC2I governance

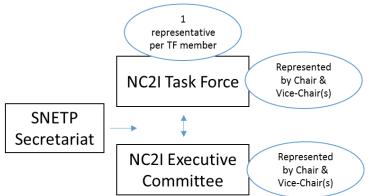
## 3.2.1 Option 1

The first option is rather a classical model already used for instance in SNETP and NUGENIA with minor divergences.

The members of NC2I are represented by a Task Force (1 representative per member) to take decision on strategic orientations. The Task Force is represented by the Chair and Vice Chair(s). A significant industrial driven approach in the representation is considered as positive signal to any potential public and private funders.

Operational and technical issues are to be discussed and decided on the Executive Committee level represented by the Chair and Vice Chair(s). Depending on the number and type of NC2I members the ExCom composition shall be adequate and balanced in terms of R&D and industrial representatives.

The SNETP Secretariat provides its support; depending on the range of activities a reinforced Secretariat support may be needed at some point.



Technical working group or ad hoc Task force for particular actions (i.e. drafting of a document, setting-up a partnership...).

The split of responsibilities has to be defined clearly in order to represent NC2I at appropriate level towards the European Commission, Member State representatives and international counterparts.

For this option a significant in-kind contribution of the TF and ExCom members would be expected.

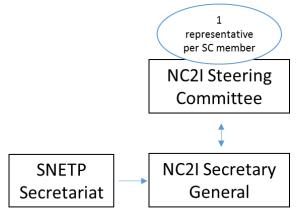
## 3.2.2 Option 2

The second model centralises more representation powers under a single person who is reporting to the members of the NC2I regularly.

The members of NC2I represented by a Steering Committee (1 representative per member) nominate a Secretary General (SG) with a clearly defined mandate to represent in all aspects the NC2I community. The SG would be the main interface for any internal and external interactions and would report regularly (i.e. on 6 months basis) to the Steering Committee.

The Secretary General could be supported by Secretariat and would be in charge of setting up and monitoring dedicated technical working groups or ad hoc task forces.

The implication of the Secretary General may require a significant time dedication (typically more than 50% of the time), depending on the scope of the mandate and available support by members (in-kind, fees collection...).



Depending on the choice of the governance scheme a number of potential implications can be considered:

- Review of NC2I membership conditions
- Signals provided to the EU and national counterparts
- Signals towards international counterparts
- Need for formalisation of certain procedures
- Need for estimation of human effort and related costs
- Prioritising of challenges
- Detailed roadmapping
- ...