NFFA - Nanoscience Foundries and Fine Analysis

Project No. FP7 – 212348

NFFA
Nanoscience Foundries and Fine Analysis

D 4.2
Structure of the NFFA-RI Governance

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TABLE OF CONTENTS

1. INTRODUCTION ..................................................................................................................... 5
   1.1. PURPOSE OF THE DOCUMENT ..................................................................................... 5
   1.2. APPLICATION AREA ...................................................................................................... 5
   1.3. REFERENCES ................................................................................................................... 5
      1.3.1. OBJECTIVE OF WORK PACKAGE 4 ........................................................................ 5
      1.3.2. DESCRIPTION OF WORK BROKEN DOWN INTO TASKS .................................... 5

2. EXECUTIVE SUMMARY ........................................................................................................... 7

3. BACKGROUND INFORMATION ............................................................................................... 9

4. GOVERNANCE ........................................................................................................................ 11
   4.1. DISTRIBUTED RESEARCH INFRASTRUCTURE ................................................................. 11
   4.2. VARIABLE GEOMETRY APPROACH ................................................................................. 11
   4.3. DECISION-MAKING ......................................................................................................... 12
   4.4. FUNDING ........................................................................................................................ 12
      4.4.1. VARIABLE FUNDING SCHEMES ............................................................................... 12
      4.4.2. EU FUNDING SCHEMES ......................................................................................... 13
      4.4.3. RSFF ......................................................................................................................... 13
      4.4.4. CASH AND IN-KIND CONTRIBUTIONS .................................................................. 14
      4.5.5. LIMITED ECONOMIC ACTIVITIES ...................................................................... 14
   4.5. GOVERNANCE & MANAGEMENT ................................................................................... 15
      4.5.1. GOVERNANCE ......................................................................................................... 15
      4.5.2. MANAGEMENT ....................................................................................................... 15
      4.5.3. PROCUREMENT & VAT ISSUES ............................................................................ 16
   4.6. NFFA GOVERNANCE STRUCTURE ................................................................................. 16

5. LEGAL FRAMEWORKS ............................................................................................................. 21
   5.1. ERIC ................................................................................................................................ 22
      5.1.1. CONTENTS OF THE APPLICATION ........................................................................ 22
      5.1.2. APPLICATION PROCEDURE FOR THE SETTING-UP OF AN ERIC ....................... 23
   5.2. SWOT ANALYSIS ............................................................................................................. 24
   5.3. ANALYSIS OF COUNCIL REGULATION (EC) No 723/2009 OF 25 JUNE 2009 ............. 25

ANNEX I: SIMULATION OF THE NFFA-ERIC STATUTES ............................................................. 35

GENERAL PROVISIONS ................................................................................................................ 35
   ARTICLE 1 – ESTABLISHMENT OF THE NFFA-ERIC .......................................................... 35
   ARTICLE 2 - STATUTORY NAME, SEAT AND LOCATION OF THE ACTIVITIES ......................... 36
   ARTICLE 3 - TASK AND ACTIVITIES ..................................................................................... 36
   ARTICLE 3 - WORKING LANGUAGE ....................................................................................... 37

MEMBERSHIP ............................................................................................................................. 37
   ARTICLE 4 – MEMBERS, REPRESENTING ENTITIES AND OBSERVERS ................................. 37
   ARTICLE 5 - VOTING RIGHTS ............................................................................................... 38
   ARTICLE 6 - OBLIGATIONS ..................................................................................................... 38
   ARTICLE 7 - LIABILITY OF THE MEMBERS ....................................................................... 38
   ARTICLE 8 - PROCEDURES FOR ACCESSION OF NEW MEMBERS ...................................... 39
   ARTICLE 9 - WITHDRAWAL AND EXPULSION OF A MEMBER ............................................ 39

GOVERNANCE/MANAGEMENT .................................................................................................... 39
   ARTICLE 10 – ORGANS ............................................................................................................ 39
ARTICLE 11 - THE GENERAL ASSEMBLY OF MEMBERS ................................................................. 39
ARTICLE 12 - THE BOARD OF DIRECTORS .................................................................................. 40
ARTICLE 13 - THE SCIENTIFIC ADVISORY COUNCIL ............................................................ 40
ARTICLE 14 – CENTRALIZED AND DISTRIBUTED MANAGEMENT STRUCTURES ..................... 41
ARTICLE 15 – AGREEMENTS BETWEEN NFFA-ERIC AND LARGE SCALE FACILITIES ........ 41

POLICIES ........................................................................................................................................ 41
ARTICLE 16 - ACCESS POLICY FOR USERS .................................................................................. 42
ARTICLE 17 - SCIENTIFIC EVALUATION POLICY ...................................................................... 42
ARTICLE 18 - DISSEMINATION POLICY ........................................................................................ 42
ARTICLE 19 - INTELLECTUAL PROPERTY RIGHTS ..................................................................... 43
ARTICLE 20 - EMPLOYMENT POLICY .......................................................................................... 43
ARTICLE 21 - PROCUREMENT POLICY .......................................................................................... 43
ARTICLE 22 - DATA POLICY .......................................................................................................... 43

FINANCE ......................................................................................................................................... 43
ARTICLE 24 - RESOURCES OF NFFA-ERIC .................................................................................... 43
ARTICLE 25 - BUDGETARY PRINCIPLES, ACCOUNTS AND AUDIT ........................................... 44
ARTICLE 26 - TAXES ...................................................................................................................... 44

DURATION, WINDING UP, DISPUTES ............................................................................................ 44
ARTICLE 27 - DURATION ................................................................................................................. 44
ARTICLE 28 – AMENDMENTS OF THE STATUTES ....................................................................... 45
ARTICLE 29 - WINDING UP ............................................................................................................ 45
ARTICLE 30 - APPLICABLE LAW ................................................................................................... 45
ARTICLE 31 - DISPUTES ................................................................................................................. 46

REFERENCES ..................................................................................................................................... 46
Deliverable D4.2: Structure of the NFFA-RI Governance

1. INTRODUCTION

1.1. Purpose of the document

Purpose of this document is to outline briefly the process which leads to the definition of the NFFA Research Infrastructure Governance and to the simulation of an ERIC Statute.

1.2. Application Area

Targets of this document are the members of the NFFA Project, the EC Project Officers, and the general public.

1.3. References


1.3.1. Objective of Work Package 4

Define the mission and the general structure of the future NFFA-RI, including general management of the central RI and of the local facilities, access criteria via quick international review of projects.

Develop schemes for implementing a NFFA-RI repository of data and protocols and to make it available to the general users. Develop schemes for remote use of NFFA-RI.

Set quality standards of production. Define efficient users’ access.

1.3.2. Description of work broken down into tasks

The following task was defined in WP4:

T4.1) Definition of the mission of NFFA-RI, developing the initial concepts:

a) To enable rapid advancements in science, engineering and technology at the nano-scale by providing efficient access to nanotechnology infrastructure and to the available fine analysis infrastructures (synchrotrons, high power lasers and FELs, neutron sources) to users from scientific institutions and industry.

b) To provide shared, open, and geographically distributed laboratories, for design, nanofabrication, synthesis, characterization, and resources to build structures, devices, and functional systems with top-down and bottom-up approaches, also to be the final stop for advanced fine analysis experiments at closely located large scale facilities (LSF). To provide an open access data repository on nanoscience.

c) To set standards in the production of well controlled nanostructured systems and the relevant metrology, and to greatly improve the reproducibility and comparison of experimental results in the energy, space and time domain performed with photon and particle beams at the LSFs.

d) To exploit the advantages of proximity to Synchrotrons and/or FELs and/or Neutron sources by making possible advanced experiments in nanoscience on both static and dynamic properties and functional behaviour and to optimize instrumentation, methods and metrology for nanoscience.

e) To establish a general scheme for specific access to industry. The aim is not only to determine access route for applicative proposals, but also the correct environmental and laboratories in terms of standard processes, equipment reliability, confidentiality of the research activities that will help to make NFFA attractive for industrial companies. In particular the effort will be devoted to match interest and fast technological transfer to Small and Medium Enterprises.
f) To define a standard and the related intellectual property issues for a NFFA-RI repository of data and metadata on nanoscience results and protocols that should guarantee open accessibility, under transparent rules, by the general science community and others. Definition of the restrictions of access to protect publication time and/or other intellectual property issues.

**T4.2)** Design the governance of a Research Infrastructure operating several Centres, each one strongly connected with local academic, research institutions, and the Large Scale Facilities (LSF). The synergy between NFFA-RI and the LSF will support various schemes of collaboration agreement to mutually benefit the development of the facilities. An ERIC compatible statute of NFFA will be drafted according to the need for a distributed ERIC and taking advantage of the ongoing efforts to shape the first ERICs.

**T4.3)** Design of a scientific management of NFFA-RI who will formulate the general and specific science plans and who will steer the action with much flexibility in order to serve the users in a particularly fast grooving and diversifying field of multidisciplinary research.

**T4.4)** Develop a robust scheme for the access by users to the NFFA-RI Centres and to the NFFA-RI Data Repository. Multiple modes of work at/with NFFA-RI will be described. Users will have quality of direct operators of the facilities, or of clients of the facilities, or of trainees at the facilities, according to expertise and effective need/possibility. Remote access to some NFFA-RI facilities will also be evaluated and implemented as a possibility. Rules of access to the NFFA-RI Repository. Issues of intellectual property of NFFA products.

**T4.5)** Assess possible agreements between NFFA-RI and other existing facilities for sharing/using instrumentation and services as well as for channelling knowledge. The deliverable will be a scheme for sharing facilities between NFFA-RI and other institutions interested in exchanging services and sharing costs for equipment and operation.

**T4.6)** Establish and analyse the financial issues related to the NFFA-RI construction and exploitation, taking into account the possibilities of different sites and different number of NFFA Centres to be started according with the NFFA roadmap (T2.3). The scenarios will be assessed by using external expertise when necessary, and/or acquiring financial software tools.

**T4.7)** Assess the cost analysis of the operation of NFFA-RI and of a prototypical reference Centre located nearby a LSF. Realistic analysis with candidate Centres will be done also by taking into account the specific cost breakdown. The running costs of NFFA-RI will be compared with those of existing similar Centres. The scenarios will be assessed by using external expertise when necessary, and/or acquiring financial software tools.

**T4.8)** Define the quality standard for NFFA-RI products and service. The definition of standards, using the results of metrology, will provide the reference basis for the plan on how to enforce standards in all NFFA-RI Centres, and how to revise and upgrade standards periodically. Quality control of NFFA must include technical definitions (metrology, reproducibility) laboratory procedures for data and management (time to access, peer review) as well as availability of data in the repository in useful form for remote consulting and for remote users, and for interoperability.

**T4.9)** Design of NFFA-RI Data Repository. Analysis of current repositories for scientific data and metadata, for possible remote data analysis codes, for remote use of NFFA-RI and integration in advanced training at universities or other science institutions. Definition of standards of data and metadata (format, remote access via WEB, remote data analysis, preservation, maintenance and digital curation of digital assets). Technical aspects and realization of a prototype of NFFA repository. Criteria of interoperability based on open standards.
2. EXECUTIVE SUMMARY

NFFA aims to become a “European infrastructure for nanoscience research with integrated access to fine analysis method and instrumentation”. In order to achieve this goal a structure of several centres is envisaged, each one co-located and well connected to a relevant radiation source (SR, FEL, lasers, neutrons), offering a wide opportunity of exploiting materials definition and fine properties. Each centre shall present common characteristics in terms of basic instrumentation platform and organization, as well as peculiarities connected to the type of radiation source operating on the same site, and other complementary existing infrastructures or special local competences.

This description of the NFFA Research Infrastructure corresponds to a “distributed facility”: i.e. a facility with one unique name and legal status, one management structure, one strategy and development plan, and having one annual report and fiscal address although its research facilities are located in different sites and different countries.

The European Research Infrastructure Consortium (ERIC) is a legal framework especially designed to facilitate the establishment and operation of research infrastructures of European interest with the involvement of several European countries. It is a legal entity with legal personality and full legal capacity recognised in all EU Member States. It may, in particular, acquire, own and dispose of movable, immovable and intellectual property, conclude contracts and be party to legal proceedings according to the Council Regulation (EC) No 723/2009 of 25 June 2009 on the Community legal framework for a European Research Infrastructure Consortium (ERIC), OJ L 206, 8.8.2009.

A SWOT analysis has confirmed the ERIC as an appropriate legal form for NFFA-RI. Among its main assets are:

- legal entity with full capacity recognized in all EU Member States with no need for a ratification procedure,
- provision of privileges and exemptions (e.g. from national value added taxes and excise duties, procurement policy),
- liability of members limited to respective contributions,
- flexibility of the statutes,
- pre-submission advice and assistance provided by the Commission,
- especially designed for pan-European research infrastructures.

NFFA-RI is structured as a distributed research infrastructure composed of 3 to 6 nanoscience centres, all interconnected to one another and with a central management hosted by one the nanoscience centres that acts also as the statutory seat of the research infrastructure. The organisational model is structured around a central hub, supported by various specific councils with different responsibilities and competences. The central hub is responsible for the coordinated operation of the distributed nodes. This includes also:

- Definition of the overall strategy
- Definition of common platforms (metrology and protocol standards)
- Definition of common policies (user access, scientific evaluation, dissemination & public awareness, IPR, employment & equal opportunities, procurement, data management, staff & users training) in compliance with the relevant national laws.
- Single entry point for users proposals and their evaluation
- Advisory boards
- Programmes assessment and reporting
- Secretarial support to all governing bodies
- Central administration and Accountancy (budget, accounts and audit)
- Technical Liaison Coordination
• Trainings Coordination

Crucial to the success and scientific specificity of NFFA is the relationship between the NFFA nanoscience centres and the co-located Large Scale Facilities (LSFs). This relationship is ruled by means of ad hoc Agreements that contain, inter alia:
• Terms of access to the LSFs
• Rights and obligations of the parties
• IPR issues
• Appointment of LSF representatives to sit in the Scientific Advisory Council
• Sharing of technical & logistic facilities
• Common data repositories

At the central level the Governance structure of NFFA-RI consists of three main bodies:
• General Assembly
• Board of Directors
• Scientific Advisory Council

The General Assembly (GA) represents all its members: i.e. Member States, Associated Countries, Third Countries, Intergovernmental Organisations.

In practice, since the expertise on research matters belongs to research organisations, the representation of a State by one or more public entities (including regions) or private entities with a public service mission is a common praxis.

Each State therefore nominates a delegation composed of as many delegates as Representing Entities. The General Assembly is constituted by the delegations of the Members. Each State has one single vote in the General Assembly.

The General Assembly is the body having full decision-making powers, which include deliberations on:
• - admission of new Member,
• - appointment and termination of the members of the Board of Directors,
• - establishment of the Scientific Advisory Council,
• - approval of the Scientific and Technical Programme of NFFA-RI,
• - approval and adoption of the annual budget proposal,
• - request for external financial contributions,
• - implementation and amendment of its Statutes.

The Board of Directors (BoD) is appointed by the General Assembly and constitutes the executive body and legal representative of NFFA-RI. In order to ensure sufficient independence and separation between the decision-making powers and the executive powers, the Board of Directors shall consist of up to 9 components: 6 Centre Scientific Directors plus 3 other members not directly involved with the Centres operation.

The Board of Directors implements the decisions of the General Assembly by directing and co-ordinating all the activities of NFFA-RI and is accountable for the RI’s finances and management.

The Scientific Advisory Council (SAC) is a consultancy body appointed by the General Assembly and composed by external experts in the field of Nanoscience research coming from international Nanoscience laboratories and from industry, and by experts of Fine Analysis methods, also representing the user community. Its main task is to advise the Board of Directors and the General Assembly on the scientific and technical activities carried out by NFFA-RI.

Other ad hoc committees (e.g. Technical Advisory Committee, Evaluation Panels, Scientific Committee, Users Association Committee) may be established for the implementation of specific activities and are also consultancy bodies.

At the local level, each NFFA Nanoscience Centre has a Local Executive Board (LEB) which comprises:
The centre Scientific Director, i.e. the body having decision-making powers. He/she is appointed by the General Assembly and also sits in the central Board of Directors.

The Managing Director who is responsible locally for Administration, general Services, Safety Issues, Industrial Liaison Office, User Office and Desk Service.

Science Programme Leaders, as many as there are scientific programmes. They are responsible for the implementation and results of the scientific programme.

Funding is a crucial issue when setting-up a research infrastructure in Europe, whether single-sited or distributed. The construction and operation of a research infrastructure requires major financial investment and a long term commitment for operation and upgrade. At the moment a large number of projects on the ESFRI Roadmap are being discussed at the same time and are all competing for the available resources and, what’s more, in the context of a major economic crisis.

A variable funding scheme allows to pool together financial resources available from the different funding agencies:

- European Commission (cohesion & research policies funding schemes, possible use of Structural Funds where available)
- Members of the ERIC: States, Regions, private sector, other institutions, foundations (cash and in-kind contributions)
- European Investment Bank (loans with RSFF)
- Revenues from limited economic activities

At EU level there is a growing belief that Member States hosting facilities should bear construction costs (or at least the majority of the costs) whereas operation costs should be covered by EU funding schemes. Anyhow, the adoption of a variable funding scheme is recommended.

For distributed research infrastructures combinations of monetary and in-kind contributions are favoured.

The main types of in-kind contributions are premises, equipment and personnel.

In-kind contributions should be accepted through strict quality and cost criteria set up in a written agreement that includes statements on:

- how non-cash contributions are to be valued (e.g. cost book value for equipment),
- the expected balance between these contributions and cash receipts,
- the in-kind supply schedule and how delivery is to be monitored against the specification and schedule of the project
- the explicit responsibilities (and rights) of the contributors,
- procedures to facilitate the finding of technically satisfactory solutions in the event of conflicts or unforeseen technical problems,
- how seconded personnel is to be valued.

In-kind contributions are more generously committed than cash contributions and the tendency is to contribute mostly (or all) in-kind. However 100% in-kind is not feasible since cash contribution is needed for covering central management costs, operation and users’ costs.

The cost of the Distributed Facility Management and Coordination must be overcompensated by the higher capacity of the Distributed Infrastructure to obtain financial means from the future Framework Programmes. This is the basis of the ERIC that should be ruled accordingly.

NFFA will prefer to avoid a fee-system and to maintain the goal of a positive balance with respect to the sum of the national contributions to the individual Centers.

3. BACKGROUND INFORMATION

Essential readings and useful inputs for the definition of the NFFA Research Infrastructure Governance were gained through:
a) Consultation of relevant websites
http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=esfri
http://cordis.europa.eu/home_it.html

b) Participation to workshops and conferences
- FP7 RI Projects – Information Day on Reporting Requirements and payment modalities... (Brussels, 29 September 2008),
- ECRI Conferences (Versailles, 9-10 December 2008; Barcelona, 23-24 March 2010),
- ERF Conference on Future Access to European Research Infrastructures: Benefits to Academia, Industry and Society (Lund, 27 October 2009),
- 2nd ERF Seminar on Human Capital for Modern Research Infrastructures (Villigen, 19 October 2010),
- 2nd ePP-CC Workshop on Specific Issues of Distributed Research Infrastructures (Brussels, 29 October 2010),
- 2nd European RI Workshop – Exchange of Experiences between Preparatory Phase Projects (Brussels, 30 October 2010),
- 3rd European RI Workshop – Exchange of Experiences between Preparatory Phase Projects (Brussels, 28 May 2010),
- ERIC Committee meetings (NFFA Project Leader is member of this committee),
- e- Infrastructure Reflection Group Conference (e-IRG) (Paris, 21-22 October 2008),
- International Conference on Research Infrastructures – FP7 Capacities Programme (Rome, 30 September 2010),
- ENERI2010 Infrastructure for Energy Research (Brussels, 29-30 November 2010).

c) Thematic readings
- European Governance Papers - Modes of Governance: A Note Towards Conceptual Clarification © Oliver Treib, Holger Bähr and Gerda Falkner,
- Directorate-General for Internal Policies, Policy Department A: Economic and Scientific Policy, Evaluation of the European Research Area (ERA): Governance Aspects, 2008,
- European Commission, Directorate-General for Research, A vision for strengthening world-class research infrastructure in the ERA, 2010,
- Practical Guidelines Legal framework for a European Research Infrastructure Consortium – ERIC ¹,

d) NFFA internal discussions and documents
- Deliverable 2.2 NFFA Science Programme
- Deliverable 2.4 Industrial Liaison Office
- Deliverable 3.1 Design of NFFA-RI Infrastructure
- Deliverable 4.3 Design of NFFA-RI Scientific Management
- Deliverable 4.4 Users Access Scheme
- Deliverable 4.6 Construction Cost Analysis of NFFA-RI
- Deliverable 4.7 Analysis of Operation Costs of NFFA-RI

e) Discussion Forum dedicated to projects on the ESFRI Roadmap for future Research Infrastructures
Special mention is worth the EC tool called DISCUSSION FORUM DEDICATED TO PROJECTS ON THE ESFRI ROADMAP FOR FUTURE RESEARCH INFRASTRUCTURES.

This forum provides information on statutes, governance, management, finance and other issues relevant to Projects on the ESFRI Roadmap which are presently in the Preparatory or Construction Phases. It is also very useful to Design Studies like NFFA that strive as well to shape the future research infrastructures (single-sited or distributed facilities) of the European Research Area. The forum is accessible to registered members and open to contributions.

The main novelty and therefore priceless added value is that the contributions on the forum site form a unique - if not the only - source of first-hand pioneer experience, knowledge and know-how on the designing, developing, constructing and managing of Research Infrastructures in Europe, generated by and shared among the effective actors while in the making, i.e. through a “learning by doing” process (PP Projects people, European Commission people, etc.).

4. GOVERNANCE

4.1. Distributed Research Infrastructure

NFFA aims to become a “European infrastructure for nanoscience research with integrated access to fine analysis method and instrumentation”. In order to achieve this goal a structure of several centres is envisaged, each one co-located and well connected to a relevant radiation source (SR, FEL, lasers, neutrons), offering a wide opportunity of exploiting materials definition and fine properties. Each centre shall present common characteristics in terms of basic instrumentation platform and organization, as well as peculiarities connected to the type of radiation source operating on the same site, and other complementary existing infrastructures or special local competences.

The European Strategic Forum on Research Infrastructures ESFRI defines a “distributed facility” as a facility with one unique name and legal status, one management structure, one strategy and development plan, and having one annual report and fiscal address although its research facilities are located in different sites and different countries.

Decision making, funding and governance structures of distributed research infrastructures are complex, costly and involve many potential stakeholders: the scientific community, national or regional funding agencies, private sector interests and European bodies. The complex intertwining of these stakeholders is a challenging issue and forms the subject of this deliverable.

4.2. Variable Geometry Approach

Research infrastructures, whether single-sited or distributed, adopt different schemes to facilitate its construction and operational phases. The so-called ‘variable geometry approach’ provides both single-sited and distributed RIs with the necessary flexibility to respond to evolving research, innovation and educational challenges.

From a recent study:

Variable geometry configurations constitute, in practice, the most promising approach to implementing RIs. Variable geometry constitutes the natural mechanism when the effort is promoted and shared between a reduced number of partners (bottom-up variable geometry configurations are promoted by interested partners) which jointly assume commitments, funding and use. It implies that decision making is carried out without the involvement of non-contributing partners.

Various forms of high-level management of RI can be considered depending on its type:
- single-sited; distributed; e-infrastructures or virtual
or on the applicable juridical status:
  – joint company; international body or European grouping (now also ERICs).
• The vertical RI management applies mostly to single-sited RI. It is hierarchically organized with concomitant consultative bodies for policy making and managing processes.
• Spatial and horizontal oriented structure is applicable to distributed, e-infrastructure and virtual RIs. This management model is structured around a core hub, supported by various specific councils with different responsibilities and competences. The basic feature of this kind of management organization is the multi-layer level of governance.

4.3. Decision-making

Decision making refers to the way that stakeholders and European bodies agree on the funding, construction and operation of research infrastructures in Europe. Complex decisions need to be taken to resolve these funding issues and to set in place appropriate governance arrangements for the research infrastructures.

Key issues on decision making include:
- Approval of the implementation of new research infrastructures under complex funding schemes involving a variety of funding sources.
- Site bidding and construction (or major upgrades) of research infrastructures.
- Selecting and establishing the appropriate governance structures.
- Management procedures during the whole life cycle (including the operation phase).
- Establishing sustainable resources for the operation of research infrastructure.

Challenges

Many delays are associated with international negotiations and national decision-making, especially in the case of distributed facilities.

4.4. Funding

4.4.1. Variable funding schemes

The construction and operation of a research infrastructure requires a major financial investment and a long term commitment. At the moment a large number of projects on the ESFRI Roadmap (47) are being discussed at the same time and are all competing for the available resources and, what’s more, in the context of a major economic crisis.

A project to be approved and obtain financial commitments by decision makers needs:
- Strong scientific case
- Consolidated design of the proposed infrastructure
- Sound/strong business case covering, in particular:
  1. Governance
  2. Costs and contributions
  3. Schedule
  4. Access policy

A sound and strong business case relies on the use of multiple source of funding (European Commission, Member States, private sector and other institutions), different allocation procedures (call, negotiation), accountability modes (openness, transparency or efficiency) and complementary EU policies (cohesion, research, competition).

The costs of bullet point 2, in the case of NFFA, refer to:
- Construction costs (whether green field constructions or adaptation of existing facilities): NFFA ca.35-45/50-80 M€ per Centre
- The estimated construction costs include installation and contingency costs.
- Operation costs for the duration of the ERIC: NFFA ca. 10 M €/year per Centre
For more information on costs see Deliverables 4.6 Construction Costs Analysis of NFFA-RI and 4.7 Analysis of Operation Costs of NFFA-RI.

The construction and operation of NFFA-RI requires as well large investments that call for pooling together financial resources.

The main funding agencies are:
- European Commission (cohesion & research policies funding schemes, possible use of structural funds where available)
- Members of the ERIC: States, Regions, private sector, other institutions, foundations (cash and in-kind contributions)
- European Investment Bank (loans by RSFF)
- Revenues from limited economic activities

4.4.2. EU funding schemes

To cover the high costs of RIs there is a need to join efforts by bringing together EU, national, regional and private funds. At EU level there is a growing belief that Member States hosting facilities should bear construction costs (or at least the majority of the costs) whereas operation costs should be covered by EU funding schemes. Anyhow, the adoption of a variable funding scheme is recommended.

Besides national, regional, private sector fundings, a combination of cohesion policy & research policy funding (European Regional Development Fund ERDF & Seventh Framework Programme FP7) is also possible for RIs:
- FP7: planning, design & access to RIs;
- ERDF/SF (Structural Funds): construction of RIs;
- FP7, CIP (Competitiveness and Innovation Programme), ERDF/ESF (European Social Fund): use of RIs for research activities

No double financing or mixed financing is allowed for the same part of a project.

Specific European instruments are needed in addition to intergovernmental approaches and Framework Programmes. Possibilities include Joint Programming, the development of Public-Private Partnerships, Joint Technology Initiatives and the use of ERA-NET+. Future regulation for structural funds could support enhanced programmes for research infrastructures (i.e. on enhanced inter-territorial cooperation focused on RI) both for ERDF and ESF funds.

In the case of NFFA it appears reasonable to address:
- the regional/local governments for supporting the civil engineering costs (new buildings, services, roads, refurbishment/expansion of suitable existing buildings)
- national public programmes for advance instrumentation as well as private (foundations, industry) for financing the instrumentation facilities
- EIB loans with national government guarantee and RSFF
- European Commission Framework Programmes for operational costs and users’ access costs.

4.4.3. RSFF

Another financing opportunity for more investment in RTD-I (Research, Technological Development and Innovation) is offered by the European Investment Bank (EIB) through the Risk-Sharing Finance Facility (RSFF). Despite the increased FP7 budget for 2007-2013, Europe is facing a lack of funding for excellent and top quality R&D projects at EU level caused by the lack of private investment in R&D. The latter is the key factor for Europe’s relatively weak total investment in R&D: financial investment is scanty for risky projects such as RTD-I projects.

The objective of RSFF is to provide loans for riskier but creditworthy RTD-I projects through risk-sharing between European Community and EIB. By contributing each (FP7 and EIB) up to 1 billion Euro for risk coverage for potential losses (non-repayment of RSFF loans by borrower/beneficiary), the EIB is enabled to provide RSFF loans and guarantees of up to 10 billion Euro. This generates a leverage effect so
that the volume of extra lending by EIB and its partners is a 4 to 6 multiple of the Community funds provided to the facility that helps facilitate the implementation of European Research Infrastructures (Capacity SP).

4.4.4. Cash and in-kind contributions

The in-kind contributions are one effective way to start quickly the construction of NFFA. A temporary in-kind contribution Committee will assist in the definition and costing of all in-kind contributions. The main types of in-kind contributions are:

- Premises
- Equipment
- Personnel

In-kind contributions should be accepted through strict quality and cost criteria set up in a written agreement that includes statements on:

- how non-cash contributions are to be valued (e.g. cost book value for equipment),
- the expected balance between these contributions and cash receipts,
- the in-kind supply schedule and how delivery is to be monitored against the specification and schedule of the project,
- the explicit responsibilities (and rights) of the contributors,
- procedures to facilitate the finding of technically satisfactory solutions in the event of conflicts or unforeseen technical problems,
- how seconded personnel is to be valued.

In-kind contributions permit to benefit from know-how available at shareholders/members institutes. The common interest of in-kind contributors creates also a collaborative spirit (as compared to industrial suppliers) and cost risks are minimised though no chances of favourable results from tender exercises are available. One must also note that in-kind contributions are more generously committed than cash contributions and the tendency is to contribute mostly (or all) in-kind. However 100% in-kind is not feasible since cash contribution is needed for covering operation costs that include the NFFA management.

Yearly operational costs are generally estimated at 10-12% of the capital investment. These include general operation of the facilities, maintenance contracts, security, services, direct users related costs, local and central management. The main types of Central management expenditures include costs for directorate & boards and central activities such as:

- Labour - Directors, officers, support staff
- Travel - by staff, General Assembly & Advisory boards, workshop attendees
- Events - annual conferences, specific workshops (training & technical)
- Other activities - dissemination (website), coordination of training & technical work

The central management of NFFA shall be financed by the legal entity of the distributed RI as part of the general operating costs.

4.5.5. Limited economic activities

The principal task of NFFA is the establishment and operation of the distributed research infrastructure on a non-economic basis. However in order to further promote innovation as well as transfer of knowledge and technology, NFFA may carry out limited economic activities.

The eventual revenues from such activities can contribute to the financing of NFFA centres.

Should the economic be successful enough to be no longer considered limited or secondary, NFFA may then consider creating a spin-off company.
4.5. Governance & Management

4.5.1. Governance

A report by an Expert Group on Research Infrastructures states that:

Key principles underpinning the governance of research infrastructure should be:
- the involvement of all research infrastructure members in the development, planning and overall monitoring of the facility;
- ensuring transparent and accountable governance and operational arrangements;
- guaranteeing contemporary e-tools for communication and decision-making;
- ensuring that the research infrastructure research programme is led by scientific members; an external scientific advisory board should be created to support this task.

Key issues that should be considered when applying spatial management structure are:
- site decisions for the hub of the distributed-types of research infrastructures;
- ensuring balance between the hub and spokes;
- staffing issues of the core team and distributed partner institutions.

A governance model should therefore be chosen in order to ensure that the RI achieves its goals in the optimum way and in compliance with the above listed principles. These principles of good governance must be contained in the RI’s founding document, providing a robust framework while allowing scope for future structural, political and possible financial changes or upgrades in response to the scientific development, and the organisational, procedural and operational needs of the RI. Procedures for dispute resolution and changing the composition of the consortium should also be addressed in the founding document, so that they are established well before there is any real case to be resolved.

The governance, management, and supervisory structures must have clearly defined and differentiated authority and responsibilities. The supervisory board’s role is to advise the management, and to make strategic decisions as quickly as needed; whereas management deals with day-to-day operations, making decisions in conformity with the determined strategy, and aware that decisions need to be taken in a timely fashion on a transparent, fact-oriented basis.

A clear and structured organisation is necessary, with direct, transparent reporting lines and the full use of management and control tools.

Independent scientific and technical evaluation and external professional auditing of financial and management performance must be carried out and acted upon.

4.5.2. Management

The whole NFFA management at all levels must be chosen on the basis of clearly defined competencies, including management and technical skills, financial competencies and scientific understanding. The management at all levels must be given full independence, responsibility and accountability for its specific budget.

The top management of NFFA will be made of scientists with direct competence in the NFFA science programme and by technical, legal, administrative, industrial experts as indicated by the General Assembly. The management must

- stimulate, confirm and implement the science programme and the users programme of NFFA
- create the conditions for successful operation, open access, accessible data repository
- create the conditions for successful in-house research programmes
- be responsible of the human resources and training programmes
- establish well defined authorities and responsibilities across and on every management level together with direct and transparent reporting lines and clear channels of communication, both internally and between the management and the governing bodies;
be able to provide immediate and regular up-to-date and definitive information, and to report this on a regular basis together with recommendations for action to the governing bodies as necessary;
• enable the systematic observation and scrutiny of activity in order to rapidly detect and report deviation, and subsequently instigate remedial action;
• establish, implement and maintain a comprehensive monitoring and risk management and mitigation system that is understood and approved by the stakeholders;
• identify and address from the outset with openness (and sensitivity) misunderstandings due to cultural differences between the different partners, in particular with respect to terminology, processes and practices.

4.5.3. Procurement & VAT issues

The procurement for a distributed RI deals with a large amount of supplies ranging from highly innovative ones to standard (off-the-shelf) components. These different types of supplies require somewhat different procurement approaches. Furthermore, it has become the practice for at least part of the contributions to be provided in-kind. These can serve a useful function but need special attention despite the lack of price negotiations.

Technical mismatches between the in-kind contributions and the whole system may lead to enormous configuration and change costs and delays during the implementation phase.

In the case of highly innovative supplies, early advantage should be taken of the expertise and knowledge of industry. The final specification decisions must pay due attention to intellectual property right (IPR) issues.

Should NFFA qualify as an ERIC, within the meaning of Article 16(f) of Directive 2004/18/EC, it shall apply a restricted procurement procedure to all research and development services when the benefits accrue to the entire scientific community and are entirely remunerated by the ERIC.

The NFFA-RI Restricted Procurement Policy shall nonetheless follow the principles of transparency, non-discrimination and competition.

Procurement by NFFA-R shall be subject to the Directive 2004/18/EC and to the Procurement provisions established by the national law of the country hosting its seat when the RI carries out economic activities.

In order to benefit from VAT and excise duty exemption NFFA must qualify as an international body within the meaning of the VAT Directive and stipulate in an agreement between its members or in a host agreement the limits and conditions of such exemption. This agreement may specify what is required to benefit from exemption (e.g. recording and recovery of the tax paid) and also define its exact scope, typically stipulating that only purchases made for official use benefit from exemption and possibly excluding certain purchases (minor purchases or purchases of certain items) or certain taxes from the exemption.

However there are still difficulties in the implementation of the VAT Exemption that is not readily accepted by some Countries, and the time needed for establishing the ERIC is still uncertain, and depends on the Member States involved.

4.6. NFFA Governance structure
The above figure shows that NFFA is a distributed research infrastructure composed of 3 up to 6 nanoscience centres, all interconnected to one another and with the central management which is hosted by one the nanoscience centres that is also the statutory seat of the research infrastructure.

The organisational model is structured around a central hub, supported by various specific councils with different responsibilities and competences. The hub is responsible for the coordinated operation of the distributed nodes.

The central hub of the NFFA distributed research infrastructure is responsible for:
- Scheduling and organizing the Board of Directors meetings
- Coordinated operation of the whole infrastructure composed of the distributed centres
- Definition of the overall strategy
- Definition of common platforms (metrology and protocol standards)
- Definition of common policies (user access, scientific evaluation, dissemination & public awareness, IPR, employment & equal opportunities, procurement, data management, staff & users training)
- Single entry point for users proposals and their evaluation
- Advisory boards
- Programmes assessment and reporting
- Secretarial support to all governing bodies
- Central administration and Accountancy (budget, accounts and audit)
- Technical Liaison Coordination
- Trainings Coordination
- Report to Sponsors and audit by EC and ERIC committee

Crucial to the success and scientific specificity of NFFA is the relationship between the NFFA nanoscience centres and the co-located Large Scale Facilities (LSFs). This relationship shall be ruled by means of ad hoc Agreements that contain, inter alia:
- Terms of access to the LSFs
- Rights and obligations of the parties
- IPR issues
- Appointment of LSF representatives to sit in the Scientific Advisory Council
Sharing of technical & logistic facilities
Common data repositories

NFFA RESEARCH INFRASTRUCTURE: CENTRAL ORGANISATIONAL CHART

Fig. 2. The NFFA-RI central governance structure.

Governing bodies of NFFA-RI are:
- General Assembly
- Board of Directors
- Scientific Advisory Council

GENERAL ASSEMBLY
The General Assembly represents all its members: i.e. Member States, Associated Countries, Third Countries, Intergovernmental Organisations.

In practice, since expertise on research matters belongs to research organisations, the representation of a State by one or more public entities (including regions) or private entities with a public service mission is a common praxis.

The terms of such representation depend on the specific mandate a State gives to one or more representing entities and should be communicated to the other members, especially as regards eventual voting rights.
Therefore each State nominates a delegation composed of as many delegates as Representing Entities. The General Assembly is constituted by the delegations of the Members.

Each State has one single vote in the General Assembly. Decisions shall be taken by simple majority voting unless otherwise specified in the Statutes. In case of a tie, the vote of the Host Member State shall break that tie.

The General Assembly shall elect a Chairperson and a Vice-Chairperson from the delegations of the member States for a period of 4 years.

The General Assembly shall meet at least once a year. The meetings shall be attended by the delegations of the Members and, without voting rights, by eventual Observers and external stakeholders (e.g. users, industry, etc.).

Meetings shall be convened by the Chairperson of the General Assembly or at the request of at least two States. Extraordinary meetings may also be convened at the request of the Board of Directors if required in the interest of the RI.

The General Assembly has full decision-making powers, which include deliberations on:
- admission of new Member,
- appointment and termination of the members/Directors,
- appointment and termination of the members of the Board of Directors
- establishment of the Scientific Advisory Council,
- approval of the Scientific and Technical Programme of NFFA-RI,
- approval and adoption of the annual budget proposal,
- request for external financial contributions,
- implementation and amendment of its Statutes.

The General Assembly elects with a qualified majority voting (at least two thirds of the Members) the members of the Board of Directors.

**BOARD OF DIRECTORS**

The Board of Directors is appointed by the General Assembly and constitutes the executive body and legal representative of NFFA-RI for a period of 4 years. In order to ensure sufficient independence and separation between the decision-making powers and the executive powers, the Board of Directors shall consist of up to 9 components: 6 NFFA Centre scientific directors plus 3 other members not directly involved with the Centres operation.

The Board of Directors shall implement the decisions of the General Assembly by directing and coordinating all the activities of NFFA-RI.

The Board of Directors shall annually submit to the General Assembly for approval:
- a report on the NFFA-RI scientific and operational activities
- a budget proposal of NFFA-RI for the coming financial year
- the accounts for the past financial year.

The Board of Directors shall be accountable for the RI’s finances and management.

The Board of Directors may elect a Chair person among themselves, detailing the delegations of power.

**SCIENTIFIC ADVISORY COUNCIL**

The Scientific Advisory Council (SAC) is appointed by the General Assembly and is composed by external experts in the field of Nanoscience research coming from international nanoscience laboratories and from industry, and by experts of Fine Analysis methods, also representing the user community.

The SAC is a consultancy body and shall advise the Board of Directors and the General Assembly on the scientific and technical activities carried out by NFFA-RI.
The Scientific Advisory Council shall also provide an active link between the General Assembly and the users community to ensure that its needs are considered by NFFA-RI. The latter may also organize the meetings of the NFFA users community.

The specific terms of reference of the SAC are described in Deliverable 4.3 Design of NFFA-RI Scientific Management.

Other ad hoc committees (e.g. Technical Advisory Committee, Evaluation Panels, Scientific Committee, Users Association Committee) may be established for the implementation of specific activities and are also consultancy bodies.

**Fig. 3. The local management structure for a typical NFFA-Centre.**

The governance structure of the local nanoscience centres is described extensively in Deliverable 4.3 Design of NFFA-RI Scientific Management.

Here suffices it to say that each NFFA Nanoscience Centre shall have a Local Executive Board (LEB) which comprises:

- The centre **Scientific Director**, i.e. the body having decision-making powers. He/she is appointed by the General Assembly and also sits in the central Board of Directors.
- The **Managing Director** who is responsible locally for the Administration, the general Services (ICT, Building, Environmental Safety & Health and Quality Assurance), the Industrial Liaison Office (e.g. intellectual property issues, liaisons, outreach...), the User Office and the Desk Service.
- **Science Programme Leaders**, as many as there are scientific programmes. They are responsible for the implementation and results of the scientific programme.
The LEB shall appoint the Facility Managers. Each NFFA Centre may establish ad hoc Outreach Advisory Committees composed by Large Scale Facility representatives, industrial representatives, local funding/partner institution representatives etc..

5. LEGAL FRAMEWORKS

A number of important issues have to be considered when establishing the legal form of a distributed research infrastructure. These include, inter alia:

- Legal personality, membership and management structure
- Statutory seats in MS or Associated countries
- Budget for investment and operational costs
- Access policy for users, data policy and scientific evaluation policy
- Member’s Liability
- Human resources, social security, staff rules and salaries
- Procurement policies
- Property rights
- Winding up of the operations and settlement of disputes

The new legal framework for a European Research Infrastructure Consortium (ERIC) provides a legal entity recognised in all Members States and some of the advantages of International Organisations in respect of the directives on VAT, excise duty and procurement.

Before 2009 at European level other European legal forms existed, such as:

- EEIG – EUROPEAN ECONOMIC INTEREST GROUPING (economic activities, max 500 employees, unlimited joint and separate liability for debts)
- SE – SOCIETAS EUROPAEA (European public limited-liability company (plc) meant for companies with economic orientation)
- EGTC – EUROPEAN GROUPING OF TERRITORIAL COOPERATION (purpose limited to cross-border, transnational and/or interregional cooperation, no non-European MS)
- EUROPEAN JOINT UNDERTAKING (private-public enterprises for selected fields of technology, complicated funding procedure: Commission initiative, adoption by the Council)

All these legal forms are not particularly adapt for pan-European distributed research infrastructures since they have been conceived and designed mostly for single-sited and economic-oriented research infrastructures.

At the moment the majority of pan-European facilities (i.e. CERN, EMBL, ESA, ESO etc.) are based on intergovernmental treaties which adopt national legal forms such as:

- Limited Liability Company (GmbH) – Germany
- Private Company limited by Shares – UK
- Société Civile (Company for non-commercial purpose) – France
- Sociedad Civil (Company for non-commercial purpose) – Spain
- Foundations
- Associations

These intergovernmental treaties provide as well VAT, excise duty exemption and flexible procurement policies however they require a rather long preparation phase and intensive lobbying activity with the Governments involved. For instance it took 12 years to establish EMBL as an international legal entity.
5.1. ERIC

The European Research Infrastructure Consortium is a legal entity with legal personality and full legal capacity recognised in all EU Member States. It may, in particular, acquire, own and dispose of movable, immovable and intellectual property, conclude contracts and be party to legal proceedings according to the Council Regulation (EC) No 723/2009 of 25 June 2009 on the Community legal framework for a European Research Infrastructure Consortium (ERIC), OJ L 206, 8.8.2009.

This legal framework has been designed by EC legal experts to facilitate the establishment and operation of research infrastructures of European interest with the involvement of several European countries.

In order to establish an ERIC all members and stakeholders involved must draft an application proposal that shall then be submitted to the Commission for approval.

5.1.1. Contents of the application

The ERIC application shall contain the following documentation:

- Proposed Statutes of the ERIC
- Technical and scientific description of the research infrastructure to be established and operated by the ERIC
- Declaration by the host Member State recognising the ERIC as an international body/organisation in the sense of the VAT and excise duty directives as of its setting up
- Agreement between the members of the ERIC on the limits and conditions of the tax exemptions
- Recognition of the legal personality and the privileges of the ERIC by associated countries or third countries, if applicable.
5.1.2. Application procedure for the setting-up of an ERIC

The above flowchart points out the main steps of the application procedure for the setting-up of an ERIC:

**PRE-SUBMISSION ADVICE**

In this initial phase, the future members of an ERIC prepare and agree on all the documents. The national procedures required to ensure the formal agreement and commitment of the individual members may vary from country to country and the stakeholders of the future ERICs are advised to work, well in advance, with their national authorities when preparing the necessary documents.

The Commission will try its best to assist potential applicants at all stages of the preparation of an ERIC.

**STEP 1**

*Electronic submission of application for verification of compliance with the ERIC Regulation (no signature required)*
The purpose of this step is to verify the compliance of the ERIC proposal with the ERIC Regulation. The electronic submission must be sent by the host state’s Permanent Representation (or Mission) to the European Union on behalf of all future members of the ERIC. The documents need to be finalised and agreed by all applicants, but no signature is required at this stage. Each ERIC application will be assessed by 4-5 experts.

**STEP 2**

**Signed request to the Commission to set-up the ERIC**

Once the applicants have received positive communication of the assessment by the Commission, the documents are sent back to all applicants for the proper and official signing. The Commission then makes the decision whether to establish the ERIC or not. If the ERIC is approved, once the decision is published in the Official Journal of the European Union, the ERIC becomes effective.

The whole procedure might take 3 to 9 nine months plus extra time for the acquisition of the signatures of all applicants.

### 5.2. SWOT Analysis

In order to ensure that the ERIC is the appropriate legal for NFFA a SWOT Analysis was carried out. Here are the main results:

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Legal entity with full capacity recognised in all EU MSs</td>
<td>• Any amendment to key elements of the statutes must pass through the same procedure as the set up of the ERIC itself</td>
</tr>
<tr>
<td>• Liability of members generally limited to their respective contributions</td>
<td>• National Ministries, not the scientific partners, are the actual members</td>
</tr>
<tr>
<td>• VAT and excise duty exemption</td>
<td>• ERIC is new, there are no precedents, therefore there are no past experiences or lessons learnt to be shared yet</td>
</tr>
<tr>
<td>• Own procurement policy respecting principles of transparency, non-discrimination and competition</td>
<td>• ERIC is also new to country ministries</td>
</tr>
<tr>
<td>• Ratification procedures as for intergovernmental organizations cannot be applied to an ERIC without violating EU law</td>
<td>• Slow process at all levels: e.g. estimated time of assessment procedure between 3-6 months</td>
</tr>
<tr>
<td>• Commission provides pre-submission advice and assistance</td>
<td>• Especially designed for pan-European Research Infrastructures and flexible usage</td>
</tr>
<tr>
<td>• Members are obliged to contribute to a balanced budget to ensure sustainability of the facility over its lifetime</td>
<td>• Opportunities</td>
</tr>
<tr>
<td>• Carry out efficiently European research programmes and projects and thus sustain a competitive edge in knowledge creation and innovation</td>
<td>• National decision mechanisms on ERIC participation in most EU Member States are ongoing processes, need to define who is authorised to decide, who needs to be involved, what procedures apply and they may differ from country to country in Europe</td>
</tr>
<tr>
<td>• Strengthen and structure the ERA and help Europe stay at the forefront of research by conducting cutting-edge research</td>
<td>• Finance ministries tend to oppose VAT exemption but don't know they cannot</td>
</tr>
<tr>
<td>• Grant open access to the European Research Community</td>
<td>• Threats</td>
</tr>
<tr>
<td>• Contribute to mobility of knowledge and researchers within ERA</td>
<td>• Contribute to dissemination and optimisation of results</td>
</tr>
</tbody>
</table>

The SWOT analysis shows that the advantages of the ERIC legal form outnumber the disadvantages. The former mainly consist in:

- The recognition of its European identity on a non economic basis;
- the flexible internal structure which accommodates a variety of infrastructure types;
- the legal personality recognised in all Member States;
- the provision of privileges and exemptions (e.g. from national value added taxes and excise duties, procurement policy);
● the possibility to establish appropriate partnerships with partners from third countries.

The disadvantages, on the other hand, are linked essentially to the fact that the ERIC is a new legal instrument and therefore there are no past experiences or lessons to be drawn upon or shared. Moreover, at the moment only one ERIC proposal has been submitted for EC approval.


The purpose of the document is to analyse the articles of the ERIC Regulation, one by one, and put in evidence the issues relevant for the designing of the future legal framework of the NFFA infrastructure. The document reproduces the articles of the ERIC Regulation (blue text) followed by comments and/or issues relevant to NFFA.

**Article 1 - Subject-matter**

This Regulation establishes a legal framework laying down the requirements and procedures for and the effects of setting-up a European Research Infrastructure Consortium (hereinafter referred to as an ‘ERIC’).

This article explains what the Regulation does. There are no issues for NFFA.

**Article 2 - Definitions**

For the purpose of this Regulation, the following definitions shall apply:

(a) ‘research infrastructure’ means facilities, resources and related services that are used by the scientific community to conduct top-level research in their respective fields and covers major scientific equipment or sets of instruments; knowledge-based resources such as collections, archives or structures for scientific information; enabling Information and Communications Technology-based infrastructures such as Grid, computing, software and communication, or any other entity of a unique nature essential to achieve excellence in research. Such infrastructures may be ‘single-sited’ or ‘distributed’ (an organised network of resources);

(b) ‘third country’ means a State that is not a Member State of the European Union;

(c) ‘associated country’ means a third country which is party to an international agreement with the Community, under the terms or on the basis of which it makes a financial contribution to all or part of the Community research, technological development and demonstration programmes.

In the ERIC Practical Guidelines April 2010 (section2, pag.11-12) the following comments about the Art.2 of the ERIC Regulation are written:

_In the case of a distributed infrastructure, the ERIC is an appropriate legal form if the infrastructure is sufficiently coordinated to qualify as an “organised network of resources”. This ranges between:

» an infrastructure having facilities located in different sites, operated by one legal entity solely, and

» an infrastructure set up as a central hub which is responsible for the coordinated operation of several closely coordinated distributed facilities, which might however retain their legal personality._

NFFA will be a “distributed research infrastructure”, that is the first choice of the above range: NFFA will consist of 3 up to 6 Nanoscale Science Research Centres at European sites that already host one or more Large Scale Facilities (LSFs) for Fine Analysis of matter, and will be operated by only one legal entity.

In the second choice there is the possibility to have different legal personalities for the facilities, but this is in contrast with the concept of "distributed infrastructure" defined by ESFRI:

"A European Distributed Infrastructure, as recognised by ESFRI, is a singular Research Infrastructure, having a unique Name and legal status, Management Structure (director or board of directors), Strategy and
Article 3 - Task and other activities

1. The principal task of an ERIC shall be to establish and operate a research infrastructure.

2. An ERIC shall pursue its principal task on a non-economic basis. However, it may carry out limited economic activities, provided that they are closely related to its principal task and that they do not jeopardise the achievement thereof.

3. An ERIC shall record the costs and revenues of its economic activities separately and shall charge market prices for them, or, if these cannot be ascertained, full costs plus a reasonable margin.

NFFA shall basically be a science research infrastructure strongly characterized by in-house scientific programs. Nevertheless the NFFA science centres will also carry out application oriented research and development, including prototyping and technological proofs of principle whenever scientific and technological development merit is met, in case also including a quote of private financing. Proprietary research for industrial users (full cost recovery) will be included in the NFFA activity upon scientific/technological merit; this research quote will anyway be limited to an adequate level in order to keep a high scientific profile.

These activities are not considered “economic activities”, as specified in the ERIC Practical Guide (page 13):

“According to the Community Framework for state aid for research and development and innovation, collaborative R&D is normally not considered to be an economic activity”

and

“An economic activity consists of offering goods and/or services on a given market......the mere fact that a fee might be charged does not on its own make this an economic activity under the condition that the access and related research support do not to correspond to what the market could provide.”

Article 4 - Requirements relating to infrastructure

The research infrastructure to be established by an ERIC shall meet the following requirements:

(a) it is necessary for the carrying-out of European research programmes and projects, including for the efficient execution of Community research, technological development and demonstration programmes;

This requirement comes directly from the Article 187 TFEU “The Union may set up joint undertakings or any other structure necessary for the efficient execution of Union research, technological development and demonstration programmes”. The European Research Infrastructures have a determinant role in pursuing this goal. NFFA aims to become a focus point in Europe in nanoscience research and nanotechnology development.

(b) it represents an added value in the strengthening and structuring of the European Research Area (ERA) and a significant improvement in the relevant scientific and technological fields at international level;

As outlined in the ERIC Practical Guidelines (page 15), “ERIC status is reserved for state-of-the-art research infrastructures that will create unique opportunities to carry out advanced research, attract the best researchers from across the world and train highly qualified students and engineers”. This requirement is in agreement with the NFFA vision that results in four key concepts as follows:

- NFFA will offer an open access to a pan-European distributed facility, providing a unique access portal,
- NFFA centres will be located close to LSFs with the aim to achieve an optimized exploitation of fine analysis available at the LSFs by (a) strategic access to them and (b) raising the standards in sample preparation;
- NFFA will define a common metrology and will offer a widespread technological platform so as to (a) provide a step forward in the challenge of atomic precision manufacturing and (b) shift the scientific competition towards ideas and intellectual skills;
- NFFA will realize the first Nanoscience Repository so as to make the results easily available also for industries and SMEs.

(c) effective access, in accordance with the rules established in its Statutes, is granted to the European research community, composed of researchers from Member States and from associated countries;

NFFA will offer an effective open access for academic and industrial researchers, assisted, when needed, by highly qualified staff, composed of scientists and engineers. The NFFA open access mode will be regulated by a peer review following the scientific/technological merit criterion for both public-academic and private institutions. Through open access to NFFA, the European scientists and nanotechnology developers will exploit a set of multidisciplinary facilities that will be instrumental in their advanced research as a complement of their own programs as well as a main infrastructure for new research.

(d) it contributes to the mobility of knowledge and/or researchers within the ERA and increases the use of intellectual potential throughout Europe; and

NFFA facility will be a reference for European nanoscience research and nanotechnology development. By providing open access to state-of-the-art instrumentation NFFA will benefit existing users of the LSFs but most importantly will attract new users. The building of scientific communities and interest groups around the NFFA facilities and the LSFs will enhance cooperation among research groups and will benefit the international competitiveness of the European research communities.

(e) It contributes to the dissemination and optimisation of the results of activities in Community research, technological development and demonstration.

NFFA will develop the first repository of data and metadata on nanoscience results and protocols for metrology, synthesis and analysis. The aim is to guarantee open accessibility by the general science community, to make nanoscience and nanotechnology outcomes promptly available to the society to improve the scientific culture on these fields, and to make the results of nanoscience centres easily available for specific applications developed by technology districts as well as for next generation products manufactured by industries and SMEs.

**Article 5 - Application for the setting-up of an ERIC**

1. The entities applying for the setting-up of an ERIC (hereinafter referred to as applicants) shall submit an application to the Commission. The application shall be submitted in writing in one of the official languages of the institutions of the Union and shall contain the following:
   (a) a request to the Commission to set up the ERIC;
   (b) the proposed Statutes of the ERIC referred to in Article 10;
   (c) a technical and scientific description of the research infrastructure to be established and operated by the ERIC, addressing in particular the requirements set out in Article 4;
   (d) a declaration by the host Member State recognising the ERIC as an international body in the sense of Articles 143(g) and 151(1)(b) of Directive 2006/112/EC and as international organisation in the sense of the second indent of Article 23(1) of Directive 92/12/EEC, as of its
setting up. The limits and conditions of the exemptions provided for in these provisions shall be laid down in an agreement between the members of the ERIC.

2. The Commission shall assess the application in line with the requirements laid down in this Regulation. During the assessment it shall obtain the views of independent experts in particular in the field of the intended activities of the ERIC. The result of such assessment shall be communicated to the applicants who shall, if necessary, be invited to complete or amend the application.

This article explains the principal documents contained in an application for the setting-up of an ERIC, and the assessment method of the Commission.

It is important to highlight the article 5(1)(d): Member States hosting NFFA facilities have to declare that they recognize NFFA-ERIC as international body and international organisation for the purpose of the directives on VAT and excise duties. In this way NFFA-ERIC will benefit from the exemption from VAT for its purchases in the Member States. This declaration has to be included in the application, this could be a bottleneck.

Article 6 - Decision on the application

1. The Commission shall, taking into account the results of the assessment referred to in Article 5(2) and in accordance with the procedure referred to in Article 20:
   a. adopt a decision setting up the ERIC after it has satisfied itself that the requirements laid down in this Regulation are met; or
   b. reject the application if it concludes that the requirements laid down in this Regulation are not met, including in the absence of the declaration referred to in Article 5(1)(d).

2. The decision on the application shall be notified to the applicants. In the case of a rejection, the decision shall be explained in clear and precise terms to the applicants.

3. The decision setting up the ERIC shall also be published in the L series of the Official Journal of the European Union.

4. The essential elements of the Statutes as set out in Article 10 points (b) to (f) and in points (i) to (vi) of point (g) contained in the application shall be annexed to the decision setting up the ERIC.

This article explains the key points related to the decision of the Commission on the application of an ERIC. Again the declaration of the Member States referred to in Art 5(1)(d) is fundamental.

Article 7 - Status of an ERIC

1. An ERIC shall have legal personality as from the date on which the decision setting up the ERIC takes effect.

2. An ERIC shall have in each Member State the most extensive legal capacity accorded to legal entities under the law of that Member State. It may, in particular, acquire, own and dispose of movable, immovable and intellectual property, conclude contracts and be a party to legal proceedings.

3. An ERIC is an international organisation within the meaning of Article 15(c) of Directive 2004/18/EC.

Article 7 says that the legal personality and the full legal capacities are key elements for the Status of an ERIC.

Following the article 7(3), Member States hosting NFFA facilities will recognize NFFA-ERIC as international organisation for the purpose of the directives on the public procurement. In this way NFFA-ERIC will adopt procurement policies not subject to national law, but simply respecting principles of transparency, non-discrimination and competition.

Article 8 - Seat and name
1. An ERIC shall have a statutory seat, which shall be located on the territory of a member which shall be a Member State or an associated country.

NFFA will be a “distributed research infrastructure” with facilities located in 3-6 sites hosting a LSF. These sites will presumably be in the territory of Member States, and the statutory seat will be in one of these sites. Even if associated countries could be Members of NFFA (if they own a LSF), it should be better to have the statutory seat in a Member State for the purpose of VAT exemption, as written in the ERIC Practical Guides (“Annex II: VAT and excise duty exemptions”, page 34): “The effects of the exemption provided under the VAT Directive derive from EU Law and the exemption only applies if the host State of the ERIC is a Member State. Goods or services supplied to an ERIC whose statutory seat is located in an associated country may not benefit from that exemption.”

2. An ERIC shall have a name containing the abbreviation ‘ERIC’.

The name of the infrastructure will presumably be NFFA-ERIC.

**Article 9 - Requirements for membership**

1. The following entities may become members of an ERIC:
   (a) Member States;
   (b) associated countries;
   (c) third countries other than associated countries;
   (d) intergovernmental organisations.

NFFA will be constituted by at least 3 Member States (see next Article) which will have as principal prerequisite to own a LSF in its territory. NFFA is organizing one-to-one meetings with European LSFs that could be partners of NFFA centres, up to now 4 meetings have been held (Elettra in Italy, MAX IV in Lund, Diamond in Oxford and SLS in Villigen).

2. An ERIC shall have at least three Member States as members. Further Member States may join as members at any time on fair and reasonable terms specified in the Statutes and as observers without voting rights on conditions specified in the Statutes. Further associated countries and third countries other than associated countries as well as intergovernmental organisations may also become members of an ERIC, subject to approval by the assembly of members, referred to in Article 12(a), in accordance with the conditions of and procedure for changes in membership laid down in its Statutes.

This article leaves the ERIC free to define in its Statutes the procedures for membership, requiring only fair and reasonable conditions for accepting further Member States as members and approval of the General Assembly of Members to accept also associated and third countries. No issues for NFFA.

3. Member States shall hold jointly the majority of the voting rights in the assembly of members.

This article aims to assure a European dimension to the ERIC. No issue for NFFA.

4. Any Member State, associated country or third country may be represented by one or more public entities, including regions or private entities with a public service mission, as regards the exercise of specified rights and the discharge of specified obligations as a member of the ERIC.
For NFFA the entities of each Member State will be the national research organizations, the existing facilities (e.g. the LSFs), other public (e.g. regions) and private entities. Each entity will have a specific and clear mandate to be communicated to the other Member States, especially as regards voting rights.

5. Associated countries, third countries and intergovernmental organisations applying for the setting-up of or for membership in an ERIC shall recognise that that ERIC shall have legal personality and capacity in accordance with Article 7(1) and (2) and that it shall be subject to rules determined in application of Article 15.

6. Associated and third countries applying for the setting-up of or for membership in an ERIC shall accord to the ERIC treatment equivalent to that following from Articles 5(1)(d) and 7(3).

No issue for NFFA.

Article 10 - Statutes
The Statutes of an ERIC shall contain at least the following:
(a) a list of members, observers and, where applicable, of entities representing members and the conditions of and the procedure for changes in membership and representation in compliance with Article 9;
(b) the tasks and activities of the ERIC;
(c) the statutory seat in compliance with Article 8(1);
(d) the name of the ERIC in compliance with Article 8(2);
(e) the duration, and the procedure for the winding-up in compliance with Article 16;
(f) the liability regime, in compliance with Article 14(2);
(g) the basic principles covering:
(i) the access policy for users;
(ii) the scientific evaluation policy;
(iii) the dissemination policy;
(iv) the intellectual property rights policy;
(v) the employment policy, including equal opportunities;
(vi) the procurement policy respecting the principles of transparency, non-discrimination and competition;
(vii) a decommissioning, if relevant;
(viii) the data policy;
(h) the rights and obligations of the members, including the obligation to make contributions to a balanced budget and voting rights;
(i) the bodies of the ERIC, their roles and responsibilities and the manner in which they are constituted and in which they decide, including upon the amendment of the Statutes, in compliance with Articles 11 and 12;
(j) the identification of the working language(s);
(k) references to rules implementing the Statutes.
The Statutes shall be publicly available on the website of the ERIC and at its statutory seat.

A simulation of NFFA-ERIC Statutes has been realized (Annex 1).

Article 11 - Amendments of the Statutes
1. Any amendment of the Statutes concerning the matters referred to in points (b) to (f) or in Article 10(g)(i) to (vi) shall be submitted to the Commission by the ERIC for approval.
2. Such amendment shall not take effect before the decision granting approval has come into force. The Commission shall apply Articles 5(2) and 6, mutatis mutandis.
3. Any amendment of the Statutes other than that referred to in paragraph 1 shall be submitted to the Commission by the ERIC within 10 days after its adoption.
4. The Commission may raise an objection to such amendment within 60 days from the submission giving reasons why the amendment does not meet the requirements of this Regulation.
5. The amendment shall not take effect before the period for objecting has expired or has been waived by the Commission or before an objection raised has been lifted.
6. The application for the amendment shall contain the following:
   (a) the text of the amendment proposed or, where appropriate, as adopted, including the date on which it enters into force;
   (b) the amended consolidated version of the Statutes.

No issue for NFFA in the actual phase of the design study. However it is important to highlight that points (b) to (f) and sub-points (i) to (vi) of the Statutes have to be clear and straightforward, they will give the main directions of the NFFA-ERIC, and for this reason changing only one of this points leads up to repeat the whole procedure for setting up the ERIC. These points should contain the essential provisions and can be completed with other documents that can be modified in a way specified in the ERIC Statutes without the need of the amendment procedure.

**Article 12 - Organisation of the ERIC**
The Statutes shall provide for at least the following bodies having the following competencies:

- an assembly of members as the body having full decision-making powers, including the adoption of the budget;
- a director or a board of directors, appointed by the assembly of members, as the executive body and legal representative of the ERIC.

The Statutes shall specify the manner in which the members of the board of directors legally represent the ERIC.

NFFA-ERIC in addition of the General Assembly of Members and the Director will also have as its organs the Scientific Advisory Council. A tentative definition of its roles and responsibilities has been outlined in the article 13 of the Simulation of the NFFA-ERIC Statutes (Annex 1).

**Article 13 - Budgetary principles, accounts and audit**
1. All items of revenue and expenditure of an ERIC shall be included in estimates to be drawn up for each financial year and shall be shown in the budget. The revenue and expenditure shown in the budget shall be in balance.
2. The members of an ERIC shall ensure that the appropriations are used in accordance with the principles of sound financial management.
3. The budget shall be established and implemented and the accounts presented in compliance with the principle of transparency.
4. The accounts of an ERIC shall be accompanied by a report on budgetary and financial management of the financial year.
5. An ERIC shall be subject to the requirements of the applicable law as regards preparation, filing, auditing and publication of accounts.

In the NFFA-ERIC Statutes there will be specified the obligation of the Members to make contributions to a balanced budget (Article 10(h) of the ERIC Regulation). The Members will contribute annually to the budget on the basis of the needs of NFFA-ERIC activity and according to a share of financial contributions included in a budget proposal that will presumably be submitted annually by the Director/s to the General Assembly of Members (Art. 24 of the NFFA-ERIC Simulation (Annex 1)).

**Article 14 - Liability and insurance**

1. An ERIC shall be liable for its debts.
2. The financial liability of the members for the debts of the ERIC shall be limited to their respective contributions provided to the ERIC. The members may specify in the Statutes that they will assume a fixed liability above their respective contributions or unlimited liability.
3. If the financial liability of the members is not unlimited, the ERIC shall take appropriate insurance to cover the risks specific to the construction and operation of the infrastructure.
4. The Community shall not be liable for any debt of the ERIC.

The liability of the Members of an ERIC has to be specified in its Statutes. No issue for NFFA.

**Article 15 - Applicable law and jurisdiction**

1. The setting-up and internal functioning of an ERIC shall be governed: (a) by Community law, in particular this Regulation, and the decisions referred to in Articles 6(1)(a) and 11(1); (b) by the law of the State where the ERIC has its statutory seat in the case of matters not, or only partly, regulated by acts referred to in point (a); (c) by the Statutes and their implementing rules.
2. The Court of Justice of the European Communities shall have jurisdiction over litigation among the members in relation to the ERIC, between the members and the ERIC and over any litigation to which the Community is a party.
3. Community legislation on jurisdiction shall apply to disputes between an ERIC and third parties. In cases not covered by Community legislation, the law of the State where the ERIC has its statutory seat shall determine the competent jurisdiction for the resolution of such disputes.

No relevant issues for NFFA. It is important to highlight the choice of the Statutory Seat as regards the requirements of its applicable law for preparation, filing, auditing and publications of accounts (Art. 13(5) of the ERIC Regulation).

**Article 16 - Winding-up and insolvency**

1. The Statutes shall determine the procedure to be applied in the case of winding-up of the ERIC following a decision of the assembly of members. Winding-up may include the transfer of activities to another legal entity.
2. Without undue delay after the adoption of the decision by the assembly of members to wind up, and in any event within 10 days after such adoption, the ERIC shall notify the Commission thereof. The Commission shall publish an appropriate notice in the C series of the Official Journal of the European Union.
3. Without undue delay after the closure of the winding-up procedure, and in any event within 10 days after such closure, the ERIC shall notify the Commission thereof. The Commission shall publish an
appropriate notice in the C series of the Official Journal of the European Union. The ERIC shall cease to exist on the day of publication of the notice.

4. At any time, in the event that the ERIC is unable to pay its debts, it shall immediately notify the Commission thereof. The Commission shall publish an appropriate notice in the C series of the Official Journal of the European Union.

No issue for NFFA.

Article 17 - Reporting and control
1. An ERIC shall produce an annual activity report, containing in particular the scientific, operational and financial aspects of its activities referred to in Article 3. It shall be approved by the assembly of members and transmitted to the Commission and relevant public authorities within six months from the end of the corresponding financial year. This report shall be made publicly available.

2. An ERIC and the Member States concerned shall inform the Commission of any circumstances which threaten to seriously jeopardise the achievement of the task of the ERIC or to hinder the ERIC from fulfilling the requirements laid down in this Regulation.

3. Where the Commission obtains indications that an ERIC is acting in serious breach of this Regulation, the decisions adopted on the basis thereof or other applicable law, it shall request explanations from the ERIC and/or its members.

4. If the Commission concludes, after having given the ERIC and/or its members a reasonable time to provide their observations, that the ERIC is acting in serious breach of this Regulation, the decisions adopted on the basis thereof or other applicable law, it may propose remedial action to the ERIC and its members.

5. If no remedial action is taken, the Commission may repeal the decision establishing the ERIC in accordance with the procedure referred to in Article 20. Such decision shall be notified to the ERIC and be published in the L series of the Official Journal of the European Union. This shall trigger the winding-up of the ERIC.

No issue for NFFA.

Article 18 - Appropriate provisions
Member States shall take such measures as are appropriate to ensure the effective application of this Regulation.

No issue for NFFA.

Article 19 - Report and Review
Not later than 27 July 2014, the Commission shall forward to the European Parliament and the Council a report on its application and proposals for amendments, where appropriate.

No issue for NFFA.

Article 20 - Committee procedure
1. The Commission shall be assisted by a management committee.

2. Where reference is made to this paragraph, Articles 4 and 7 of Decision 1999/468/EC shall apply. The period laid down in Article 4(3) of Decision 1999/468/EC shall be set at two months.
No issue for NFFA.

Article 21 - Entry into force

This Regulation shall enter into force on the 20th day following its publication in the Official Journal of the European Union.

No issue for NFFA.
ANNEX I: SIMULATION OF THE NFFA-ERIC STATUTES

The Governments of
- ...
- ...
- ...
- ...
- ...
- ...
- ....

Hereinafter referred to as “the Consortium Members”,

Having regard to the ESFRI 2006 Report “European Roadmap for Research Infrastructures “which identified proposals for NANOSCIENCE centres as emerging proposals that may constitute a base for future upgrades of the roadmap itself9;

Having regard to the ESFRI 2010 Strategy Report and Roadmap Update 10 which stresses that organising research centres dealing with nano-science and –technology could help avoid duplication and reduce costs and that great advantage could come from the co-location of analytical facilities and nano-science centres since the concentration of capability adds value to the scientific landscape of Europe as a whole though it needs to be balanced by a broad geographic distribution and mechanisms to ensure broad scientific use and access to the facilities;

Desiring to further strengthen the European Community’s and the Consortium Members’ position in the European Research Area as well in the world-wide research context, and in particular in the field of Materials Science / Nanoscience, nanotechnologies, Materials & new Production technologies (NMP);

Have agreed as follows:

GENERAL PROVISIONS

Article 1 – Establishment of the NFFA-ERIC

There shall be a distributed European Research Infrastructure called Nanoscience Foundries and Fine Analysis (NFFA), having facilities located in 3 to 6 sites and operated only by one legal entity.


NFFA-ERIC shall have legal personality and in each Member State shall have full legal capacity accorded to legal entities under the law of the Member State. NFFA-ERIC shall be able to acquire, own and dispose of movable, immovable and intellectual property, conclude contracts and be party to legal proceedings.
NFFA-ERIC shall be recognised by the country hosting its seat as an international body within the meaning of Article 151(1)(b) of Directive 2006/112/EC, and an international organisation within the meaning of the second indent of Article 23(1) of Directive 92/12/EEC and of Article 15(c) of Directive 2004/18/EC.


Article 2 - Statutory Name, Seat and Location of the activities

The name of the European Research Infrastructure shall be “NFFA-ERIC”.

The NFFA-ERIC shall have its Statutory Seat in [country and town], hereinafter called “Host member”.

The distributed national centres are located in:
[country and town]
[country and town]
[country and town]
[country and town]
[country and town]

Article 3 - Task and Activities

NFFA-ERIC shall establish and operate a distributed research infrastructure of Pan-European interest, consisting of up to 6 Nanoscale Science Research Centres at European sites that host Large Scale Facilities (LSFs) for Fine Analysis of matter.

In particular, the main tasks of NFFA-ERIC shall be:

- To provide an infrastructure, with open access to academic, research, industry and civil services, for the integration of research efforts in nanoscience including theoretical modelling, advanced synthesis and nanofabrication methods, atomic-precision metrology, and the full exploitation of fine analysis methods available at European LSFs;

- To create a unique access point to a distributed technical platform for advanced research on nanostructured matter, including nanofabrication and characterization of nanostructures as well as atomic precision manufacturing. The NFFA platform shall perform project-based research with multiple access modes by individual scientists, groups, consortia or institutions, all regulated by the open access criteria;

- To develop the first Repository of Nanoscience Data and Protocols for Metrology, Synthesis and Analysis to serve the users community and be eventually open to a wider public under proper access rules;

- To maximize the impact of LSFs on European nanoscience and nanotechnology by establishing adequate standards of sample definition, characterization, and reproducibility for exploiting ultrafast, nanofocused, high energy resolution probes available at Synchrotrons, FELs and
Neutron facilities and for integrating simulation and experimental work of relevance in atomic precision manufacturing.

The main activities of NFFA-ERIC shall be:
- Open Access Research
- In-house Research
- Technical Services
- Data Management and Repository
- Industrial Research
- Quality Standard and Metrology
- Trainings of staff
- Trainings of users
- Dissemination Activities, Schools and Conferences

NFFA-ERIC shall pursue its statute tasks and activities on a non-economic basis. NFFA-ERIC might carry out some limited economic activities if they are closely related to its principal task and do not jeopardise its achievement.

Article 3 - Working Language

The NFFA-ERIC working language shall be English.

MEMBERSHIP

Article 4 – Members, Representing Entities and Observers

Members of NFFA-ERIC may become the following entities: a) Member States, b) Associated Countries, c) Third Countries other than associated countries, d) Intergovernmental Organisations.

NFFA-ERIC shall have at least three Member States as Members.

At the date of the signature of the present Statutes, NFFA-ERIC shall be composed of the following Members:
Member State 1
Member State 2
Member State 3

…………
Associated Country 1

…………
Third Country 1

Any Members of NFFA-ERIC may be represented by one or more public entities (hereinafter Representing Entities) including regions or private entities with a public service mission.

At the date of the signature of the present Statutes, the Representing Entities of the Members are the following:
Member State 1 is represented by ...
Entity 1a
Entity 1b

...

Member State 2 is represented by...
Entity 2a
Entity 2b

...

Member State 3 is represented by...
Entity 3a
Entity 3b

...

The Members shall inform the General Assembly of Members (referred to in Art. 11 of these Statutes) of any change of their Representing Entities, termination of their mandate, or of any change of the specific rights and obligations delegated to the Representing Entities. The changes shall be notified in writing, without requiring an amendment of these Statutes.

The Observers are Member States contributing to NFFA-ERIC. They shall attend the meetings of the General Assembly of Members on a consultative basis without voting rights. The admission of Observers and their competencies shall be subject to a decision of the General Assembly of Members. At the date of the signature of the present Statutes, the Observers of NFFA-ERIC are the following:
Member State x
Member State y
Member State z

...

Article 5 - Voting rights

Member States shall jointly hold the majority of votes in the General Assembly of Members. Each Member of NFFA-ERIC shall have a single vote in the General Assembly of Members. The Representing Entities of a Member shall appoint one single delegate designated for voting in the General Assembly of Members.

Article 6 - Obligations

The Members, or their Representing Entities, shall contribute annually to the budget of NFFA-ERIC on the basis of the needs of NFFA-ERIC activity and according to a share of financial contributions included in the annual Budget proposal of NFFA-ERIC (referred to in Art. 24 of these Statutes).

In case of admission of new Members, the General Assembly of Members shall set up a new share of the contributions to the budget.

Article 7 - Liability of the Members
The financial liability of each Member for the debts of the ERIC shall be limited to its respective contribution provided to the NFFA-ERIC and agreed upon in the annual spending plans.

NFFA-ERIC shall take appropriate insurance to cover the risks specific to the construction and operation of the infrastructure.

The European Community shall not be liable for any debt of the NFFA-ERIC.

**Article 8 - Procedures for Accession of new Members**

After the entry into force of these Statutes, NFFA-ERIC may accept new Members. The accession of a new Member shall be subject to the approval of the General Assembly of Members.

The General Assembly of Members shall fix voting rights and contributions of the new Member.

**Article 9 - Withdrawal and expulsion of a Member**

Members may withdraw from NFFA-ERIC at the end of each financial year following a one-year notice sent to the Assembly of Members.

Any outstanding fees must be paid and any pending obligations must be fulfilled before withdrawal of the Member is confirmed.

The General Assembly of Members may decide to expel a Member if it seriously fails in its obligations or breaches these Statutes, after that the concerned Member has been allowed to give explanations to the General Assembly of Members.

**GOVERNANCE/MANAGEMENT**

**Article 10 – Organs**

NFFA-ERIC shall have the following organs:
- The General Assembly of Members
- The Board of directors
- The Scientific Advisory Council

**Article 11 - The General Assembly of Members**

Each Member State shall nominate a delegation composed of as many delegates as Representing Entities. The General Assembly of Members shall be constituted by the delegations of the Members. Each Member has one single vote in the General Assembly. Decisions shall be taken by simple majority voting unless otherwise specified in these Statutes. In case of a tie, the vote of the Host Member State shall break that tie.

The General Assembly shall elect a Chairperson and a Vice-Chairperson from the delegations of the Member State for a period of 4 years.
The General Assembly of Members shall meet at least once a year. The meetings shall be attended by the delegations of the Members and, without voting rights, by the Observers and by external stakeholders (e.g. users, industry, etc.). Meetings shall be convened by the Chairperson of the General Assembly or at the request of at least two Member States. Extraordinary meetings may also be convened at the request of the Board of Directors if required in the interest of the ERIC.

The General Assembly of Members has full decision-making powers, which include deliberations on:
- admission of new Member,
- appointment and termination of the members/Directors,
- establishment of the Scientific Advisory Council (referred to in Art. 13 of these Statutes),
- approval of the Scientific and Technical Programme of NFFA-ERIC,
- approval and adoption of the annual Budget proposal,
- request for external financial contributions,
- implementation and amendment of these Statutes.

The General Assembly elects with a qualified majority voting (at least two thirds of the Members) the members of the Board of Directors according to Article 12.

**Article 12 - The Board of Directors**

The Board of Directors shall be appointed by the General Assembly of Members as the executive body and legal representative of NFFA-ERIC for a period of 4 years. It shall consist of up to 9 components: 6 NFFA Centre directors plus 3 other members not directly involved with the Centres operation.

The Board of Directors shall implement all the decisions of the General Assembly of Members by directing and co-ordinating all the activities of NFFA-ERIC.

The Board of Directors shall annually submit to the General Assembly of Members for approval:
- a report on the NFFA-ERIC scientific and operational activities
- a Budget proposal of NFFA-ERIC for the coming financial year
- the accounts for the past financial year.

The Board of Directors shall be accountable for the ERIC’s finances and management.

The Board of Directors may elect a Chair person among themselves, detailing the delegations of power.

**Article 13 - The Scientific Advisory Council**

The Scientific Advisory Council shall be appointed by the General Assembly of Members.

The Scientific Advisory Council shall be composed by external experts in the field of Nanoscience research coming from international Nanoscience laboratories and from industry, and by experts of Fine Analysis methods, also representing the user community.

The Scientific Advisory Council shall advise the Board of Directors and the General Assembly of Members on the scientific and technical activities carried out by NFFA-ERIC.
The Scientific Advisory Council shall also provide an active link between the General Assembly of Members and the users community to ensure that its needs are considered by NFFA-ERIC. They may also organize the meetings of the NFFA users community.

Article 14 – Centralized and Distributed Management Structures

NFFA-ERIC is set up as a central hub which is responsible for the operation of the whole Infrastructure as well as the coordinated operation of its up to 6 nodes i.e. the closely coordinated distributed Nanoscience Centres.

The central Management hub shall have its seat in the Hosting State Country. The Board of Directors, supported by the Scientific Advisory Council, shall also be responsible for the coordination of the following core activities:

- Overall strategy
- Common standards
- Central Administration
- User Administration
- NFFA Centres Operation Coordination
- Technical Liaison Coordination
- Trainings Coordination

Ad hoc committees may be established for the implementation of these activities as for instance the Evaluation Panels of the users proposals.

Each NFFA-ERIC Nanoscience Centre shall have a Local Executive Board (LEB) which comprises:

- The Centre’s Scientific Director who sits also in the Central Board of Directors
- The Managing Director who is responsible for the local administration, Environmental Safety & Health and Quality Assurance, other services (e.g. intellectual property issues, liaisons, outreach...)
- Science Programme Leaders, as many as there are scientific programmes. They are responsible for the implementation and results of the scientific programme.

The LEB shall appoint the Facility Managers.

Each NFFA Centre may establish ad hoc Outreach Advisory Committees composed by Large Scale Facility representatives, industrial representatives, local funding/partner institution representatives etc..

Article 15 – Agreements between NFFA-ERIC and Large Scale Facilities

Special ad hoc agreements between NFFA-ERIC and the Large Scale Facilities shall be devised in order to fix the terms and conditions of the collaboration. Representatives of the Large Scale Facilities may sit in the local Advisory Committees.

POLICIES

The following Articles (from Article 16 to Article 22 of these Statutes) contain essential provisions about Policies that may be complemented by detailed provisions contained in separate documents. These documents are internal documents of NFFA-ERIC and may be modified without requiring an amendment of
Article 16 - Access Policy for Users

NFFA-ERIC shall provide effective open access to users by means of a single access portal. It shall strive to attract the best researchers from across the world. The open access is regulated by an independent peer review procedure based on scientific/technological merit criteria generally free of charge.

Seven different open access modes are envisaged:

1. Non proprietary in-house research by NFFA staff within the established quotas and according to the in-house scientific programme monitored by NFFA Scientific Advisory Committee.
2. Non-proprietary research by external users. These users submit proposals to NFFA, describing the details of the experiment. All proposals are evaluated by a proposal review committee and ranked against competing proposals. Successful proposals are given NFFA access time free of charge. The results of the experiments, done during the allocated access time, are expected to be published in due time in peer reviewed scientific journals, and original data and metadata will be requested to be stored appropriately to be available for open access, after a period of time.
3. Group pre-qualified via peer review as BAG users (block allocation groups) shall perform research under the same conditions as group 2. but with its own access management within the quotas attributed to the BAG by the Scientific Advisory Committee.
4. Proprietary research: users can make a contract with NFFA (depending on the internal NFFA agreements) for performing experiments on which they want to have a non disclosure agreement (non peer reviewed and/or for commercial use). They must cover the full costs of the NFFA access time and have no obligation to publish the results. Efforts will be made to secure appropriate intellectual property control for proprietary users.
5. Users accessing NFFA for technological desk service ruled by fees.
6. Trainees of NFFA courses and PhD programmes in collaboration with external academic/research institutions.
7. Users who demand access to the NFFA Data Public Repository. Such access will be regulated according to the relevant NFFA policy on data management and storage. The access to NFFA Data Repository will define a new category of users with appropriate rules and restrictions.

Article 17 - Scientific Evaluation Policy

The scientific evaluation will be the duty of the Scientific Advisory Council who will also monitor the access selection criteria, the long-term access proposals and the contractual research. The Scientific Advisory Council will advise on the needs of specific evaluation sessions and workshops that the management should organize.

Article 18 - Dissemination Policy
NFFA-ERIC shall disseminate own research results and collected data and metadata to the scientific community through open access publication. The users’ results, through open access, shall also be available in the public domain according to standard publication practices as well as via the NFFA repository.

**Article 19 - Intellectual Property Rights**

The NFFA-ERIC shall establish and publicise policies and procedures for the management of intellectual property in line with the Code of Practice for universities and other public research organisations.\(^{12}\)

**Article 20 - Employment Policy**

The NFFA-ERIC is an equal opportunity employer. Employment contracts shall follow the national laws of the country in which the staff is employed.

**Article 21 - Procurement Policy**

NFFA-ERIC shall be recognised by the country hosting its seat as an international body within the meaning of Article 15(c) of Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts.

Within the meaning of Article 16(f) of Directive 2004/18/EC\(^{13}\), NFFA-ERIC shall apply a restricted procurement procedure to all research and development services when the benefits accrue to the entire scientific community and which are entirely remunerated by the ERIC.

NFFA-ERIC Restricted Procurement Policy shall follow the principles of transparency, non-discrimination and competition.

Procurement by NFFA-ERIC shall be subject to the Directive 2004/18/EC and to the Procurement provisions established by the national law of the country hosting its seat when the ERIC carries out economic activities.

**Article 22 - Data Policy**

NFFA-ERIC shall develop a Repository of Nanoscience Data and Protocols for Metrology, Synthesis and Analysis. All data, after a suitable embargo period, will be progressively open to the public. Transparent rules will enable the public to access the NFFA Data Repository.

**FINANCE**

**Article 24 - Resources of NFFA-ERIC**

The principle resource of NFFA-ERIC shall be the contributions of the representing Entities of the Members. The contributions shall be in-kind (buildings, equipment, seconded personnel) and in-cash according to annual provisional budget.
NFFA-RI shall apply for extra contributions towards its operational costs to EC ad-hoc Framework Programme measures.

NFFA-ERIC will be enabled to ask for loans to the European Investment Bank or to international institutions. NFFA-ERIC may as well as receive other contributions from public and/or private entities.

**Article 25 - Budgetary principles, accounts and audit**

The financial year shall be from the 1st January to the 31st of December.

All items of revenue and expenditure of NFFA-ERIC shall be included in estimates to be drawn up for each financial year and shall be shown in the budget. The revenue and expenditure shown in the budget shall be in balance.

The members of NFFA-ERIC shall ensure that the appropriations are used in accordance with the principles of sound financial management.

The budget shall be established and implemented and the accounts presented in compliance with the principle of transparency.

The accounts of NFFA-ERIC shall be accompanied by a report on budgetary and financial management of the financial year. As specified in Article 12 of these Statutes, the Board of Directors shall annually submit to the General Assembly of Members:

a) the Budget proposal of NFFA-ERIC for the coming financial year,
b) the accounts for the past financial year.

NFFA-ERIC shall be subject to the requirements of the applicable law of the country of the Statutory Seat as regards preparation, filing, auditing and publication of accounts.

NFFA-ERIC accounts shall be audited by a team of professional auditors appointed by the General Assembly of Members.

**Article 26 - Taxes**

For the purpose of the directives on value added taxes (VAT) and excise duties, NFFA-ERIC shall be recognised by the country hosting its seat as an international body within the meaning of Article 151(1)(b) of Directive 2006/112/EC, and as an international organisation within the meaning of the second indent of Article 23(1) of Directive 92/12/EEC and of Article 15(c) of Directive 2004/18/EC.

Limits and conditions for the exemption: taxes exemptions shall be limited to those goods and services purchased for the official purpose of the setting up and operation of the NFFA-ERIC.

**DURATION, WINDING UP, DISPUTES**

**Article 27 - Duration**
NFFA-ERIC shall be set up for a period of 12 years, commencing on the date on which the European Commission decision of setting up the NFFA-ERIC takes effect.

The NFFA-ERIC can be extended by decision of the General Assembly of Members.

Article 28 – Amendments of the Statutes

Any amendment of the Statutes shall be decided by the General Assembly of Members.

Amendments concerning articles 2, 3, 7, 16, 17, 18, 19, 20, 21, 27 and 29 of these statutes shall be submitted to the Commission for approval and shall not take effect before the decision granting approval has come in force.

Other less essential amendments shall be submitted to the Commission within ten days after their adoption by NFFA-ERIC. The Commission has a sixty-day period from the submission to raise an objection, the amendment can enter in force after the period for objection has expired or has been waived by the Commission or the objection has been lifted.

Article 29 - Winding up

The winding up of NFFA-ERIC shall occur at the expiration date or following a decision of the General Assembly of Members.

Winding-up may include the transfer of activities to another legal entity.

Without undue delay after the adoption of the decision by the assembly of members to wind up, and in any event within ten days after such adoption, NFFA-ERIC shall notify the Commission thereof. The Commission shall publish an appropriate notice in the C series of the Official Journal of the European Union.

At any time, in the event that NFFA-ERIC is unable to pay its debts, it shall immediately notify the Commission thereof. The Commission shall publish an appropriate notice in the C series of the Official Journal of the European Union.

Article 30 - Applicable Law

The setting-up and internal functioning of NFFA-ERIC shall be governed:

a) by Community law, in particular the Council Regulation and the decisions referred to in Articles 6(1)(a) and 11(1) of the Council Regulation;

b) by the law of the Member State where NFFA-ERIC has its Statutory Seat in the case of matters not, or only partly, regulated by acts referred to in point (a);

c) by these Statutes and their implementing rules.
Article 31 - Disputes

The Court of Justice of the European Communities shall have jurisdiction over litigation among the Members in relation to NFFA-ERIC, between the Members and NFFA-ERIC and over any litigation to which the Community is a party.

Community legislation on jurisdiction shall apply to disputes between NFFA-ERIC and third parties. In cases not covered by Community legislation, the law of the State where NFFA-ERIC has its Statutory Seat shall determine the competent jurisdiction for the resolution of such disputes.

REFERENCES

4. Deliverable 2.4 Industrial Liaison Office
5. Drafter’s note
7. Ex Deliverable 2.4 Industrial Liaison Office tract from A vision for strengthening world-class research infrastructure in the ERA, 2010, by European Commission, Directorate-General for Research
9. ftp://ftp.cordis.europa.eu/pub/esfri/docs/esfri-roadmap-report-26092006_en.pdf: “NANOSCIENCE centres will operate under a general coordination at European level, but with high degree of autonomy and characterization, giving a common standard offer of state of the art clean-room, synthesis, growth, nanofabrication, wet-chemistry, combinatorial methods, atomic/molecular models and advanced simulation of nanosystems, with direct access to analytical and photolithographic methods based on particle beams from synchrotrons, free electron lasers and neutron sources”
10. Official document to be released soon.
11. The concept of “distributed infrastructure” has been defined by ESFRI as follows: “A European Distributed Infrastructure, as recognised by ESFRI, is a singular Research Infrastructure, having a unique Name and legal status, Management Structure (director or board of directors), Strategy and Development Plan, Access point for users, Annual Report and Fiscal address although its research facilities are distributed in multiple sites”.