NuPNET

ERA-NET for Nuclear Physics Infrastructures
(Project no. 202914)

Kick-off Meeting

Date:
March 27, 2008 from 10:15-17:00

Place:
Hôtel Concorde Montparnasse Paris
Salon Cézanne Picasso
Place de Catalogne
40 rue du Commandant Mouchotte
F-75014 PARIS

NuPNET

ERA-NET for Nuclear Physics Infrastructures
(Project no. 202914)

Kick-off Meeting

Additional information

Internet access code via Wifi:
To get connected to the Internet via Wifi, please indicate the following access codes:

Chambre ➔ **9027**
Nom ➔ **CNRS**

NuPNET

ERA-NET for Nuclear Physics Infrastructures
(Project no. 202914)

Kick-off Meeting

(Paris, on March 27, 2008)

(Draft) Agenda

NuPNET

ERANET for Nuclear Physics Infrastructures (Project no. 202914)

Kick-off Meeting

(Paris, on March 27, 2008)

(Draft) Agenda

9:30-10:15 *Arrival*

10:15-10:45 Welcome of all participants and *tour de table*

10:45-11:15 General introduction by Sydney Galès, NuPNET Co-ordinator
(CNRS/IN2P3, France)

11:15-12:00 Presentation of the programme by Maria Douka
(Representative from the EU Commission, Directorate General for Research, Directorate B3-Research Infrastructures)

12:00-12:30 General overview of contractual matters and pending actions
(by Cédric Bosaro, CNRS/IN2P3, France)

- Progress of the negotiation and signature of the Grant Agreement ("*contract*").
- Legal framework between NuPNET partners. List of pending actions.
- Discussion.

12:30-13:00 Presentation and launch of WP1 – Management
(by Dorothée Peitzmann, CNRS/IN2P3, France)

- Presentation of the management bodies (members, roles and responsibilities).
- Description of WP1 (tasks, meetings, objectives). First deliverables.
- Discussion.

13:00-14:00 LUNCH

14:00-14:15 Photo session *(in the hotel's patio)*

14:15-14:45 Presentation of T1.3 - Communication and electronic tools
(by Nicolae Victor Zamfir, IFIN-HH, Romania)

- Description of T1.3.
- Proposal(s) for a NuPNET logo.
- First deliverables, corresponding work and responsibilities.
- Discussion.

NuPNET

ERANET for Nuclear Physics Infrastructures (Project no. 202914)

Kick-off Meeting

(Paris, on March 27, 2008)

14:45-15:30 Presentation of WP2 – Information Exchange
(by Irene Reinhard, PTGSI, Germany)

- Description of WP2.
- First deliverables, corresponding work and responsibilities.
- Discussion.

15:30-16:00 Presentation of WP3 – Definition of joint activities
(by Angela Bracco, INFN, Italy)

- Description of WP3.
- First deliverables, corresponding work and responsibilities.
- Discussion.

16:00-16:20 Presentation of WP4 – Launch of joint activities
(by José Belliure, MEC/FECYT, Spain)

- Description of WP4.
- First deliverables, corresponding work and responsibilities.
- Discussion.

16:20-17:00 Conclusions and first steps

17:00 End of the meeting

NuPNET

ERA-NET for Nuclear Physics Infrastructures
(Project no. 202914)

Kick-off Meeting

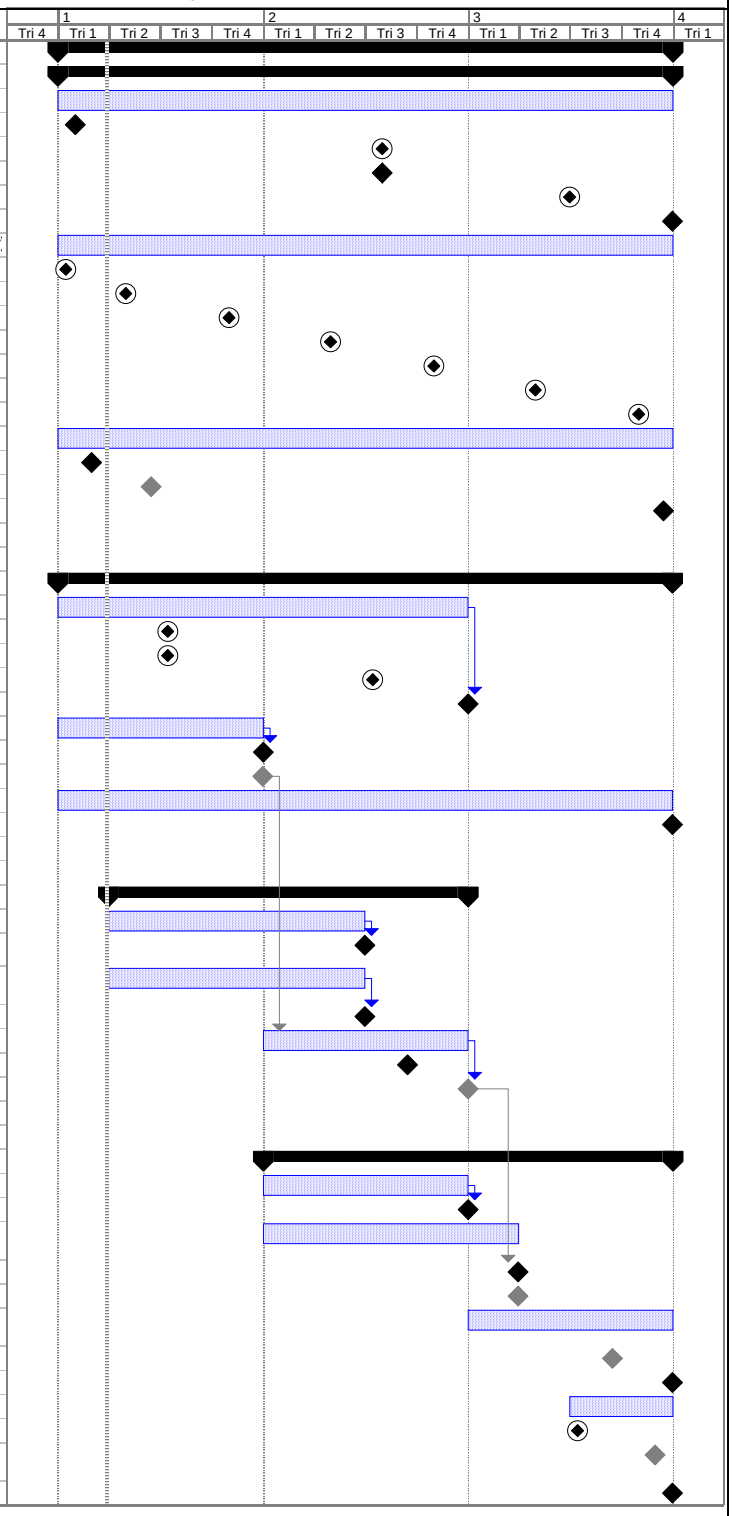
(Paris, on March 27, 2008)

Timing of Work Packages

(recall – extract from Annex 1)

NuPNET 202914 - Extract from Annex 1
B 1.3.2 Timing of work packages and their components
Gannt Chart indicating WP and Task Leaders, delivery dates...

Nº	Nom de la tâche
1	**NuPNET (Start date: March 1, 2008) (End date: Feb. 28, 2011)**
2	**WP1 Management (WP Leader: CNRS/IN2P3, Fr) (m1-36)**
3	**T1.1 Overall Management of NuPNET (Task Leader: CNRS/IN2P3, Fr)**
4	*T0+2: D1.1 Short Management plan*
5	*Governing Council (m18)*
6	*T0+18: D1.3 Report to the EU Commission*
7	*Governing Council (m30)*
8	*T0+36: D1.5 Report to the EU Commission*
9	**T1.2 Overall Co-ordination of the Consortium (Task Leader: CNRS/IN2P3, Fr)**
10	***Kick-off meeting of NuPNET (in Paris, on March 27, 2008)***
11	*Co-ordination Committee*
12	*Co-ordination Committee*
13	*Co-ordination Committee*
14	*Co-ordination Committee*
15	*Co-ordination Committee*
16	*Co-ordination Committee*
17	**T1.3 Communication and electronic tools (Task Leader: IFIN-HH, Ro)**
18	*T0+3: D1.2 Communication plan and logo*
19	**M1 Electronic tools operational to support all WPs (m6)**
20	*T0+36: D1.4 Short Report on communication*
21	
22	
23	**WP2 Information exchange (WP Leader: PTGSI, De) (m1-36)**
24	**T2.1 Systematic exchange of information (Task Leader: GSRT, Gr)**
25	*Kick-off workshop of T2.1 (jointly organized with T2.2)*
26	*Events Open days*
27	*Events Open days*
28	*T0+24: D2.2 Compilation of the results of the questionnaire*
29	**T2.2 Census of existing funding programmes (Task Leader: PTGSI, De)**
30	*T0+12: D2.1 Census of existing funding programmes*
31	**M2 Census of funding programmes delivered (m12)**
32	**T2.3 Liaison (Task Leaders: PTGSI, De and RuG, Nl)**
33	*T0+36: D2.3 Short report on liaison activities*
34	
35	
36	**WP3 Definition of joint activities (WP Leader: INFN, It) (m4-24)**
37	**T3.1 Identification of opportunities for NuPNET (Task Leader: INFN, It)**
38	*T0+18: D3.1 List of opportunities for NuPNET joint activities (and possibly beyond)*
39	**T3.2 Identification and tackling of formal and legal barriers to launching joint activities (Task Leader: NCBiR, Po)**
40	*T0+18: D3.2 Report on formal and legal barriers*
41	**T3.3 Funding Plan for joint activities (Task Leader: CEA, Fr)**
42	*T0+21: D3.3 Funding Plan for joint activities*
43	**M3 General approval of the Funding Plan for joint activities (m24)**
44	
45	
46	**WP4 Launching of joint activities (WP Leader: FECYT, Sp) (m13-36)**
47	**T4.1 Use of existing co-operation tools (Task Leader: INRNE, Bg)**
48	*T0+24: D4.1 Report on the possible use of co-operation tools*
49	**T4.2 Selection of joint activities at a transnational level (Task Leaders: FECYT and MEC, Sp)**
50	*T0+27: D4.2 Short report on the selection of joint transnational activities*
51	**M4 Selection of one or more joint transnational activities (m27)**
52	**T4.3 Agreement on one or more pilot transnational activity (Task Leaders: FECYT and MEC, Sp)**
53	**M5 Launch of the pilot joint transnational activity (m33)**
54	*T0+36: D4.3 Report on the transnational agreement of the selected pilot projects*
55	**T4.4 Sustainable action beyond NuPNET (Task Leader: NKTH, Hu)**
56	*Kick-off Meeting of T4.4*
57	**M6 Creation of a preparatory group for the future managing of European joint activities in nuclear physics infrastructures (m35)**
58	*T0+36: D4.4 Plan for setting-up the "preparatory group" beyond NuPNET*



Project: **NuPNET (03/2008-02/2011)**
Annex 1 approved by EU on:
March 11, 2008

Task | Summary | Milestone | Meeting | Deliverable

NuPNET

ERA-NET for Nuclear Physics Infrastructures
(Project no. 202914)

Kick-off Meeting

(Paris, on March 27, 2008)

Approved Annex 1

(as of March 11, 2008)

SEVENTH FRAMEWORK PROGRAMME
NuPNET

ERANET for Nuclear Physics Infrastructures

Grant agreement for a Coordination and support action

Annex I - "Description of Work"

Date of approval of Annex 1 by the Commission: 11 March 2008

Contents

PART A

A. Budget breakdown and project summary

A.1 Project summary form (copy of A1 form of the GPFs)

To face the increase in the complexity of facilities, and the cost and technical demands in a global context of international user groups and expertise, 18 European funding Agencies representing 14 countries have decided to provide Europe with a more coherent funding of its Nuclear Physics Infrastructures and equipments. The project will ensure exchange of information, the establishment of list of projects for which transnational funding opportunities are timely and agreed upon. Following this list of "opportunities", achievement of multilateral agreements, through one or more concrete pilot actions, will be proposed. The success of the activities within the scope of the project will be a major achievement in the field and will have a strong impact on the present and future European landscape of Research Infrastructures.

A.2 List of beneficiaries

List of Beneficiaries

Beneficiary Number *	Beneficiary name	Beneficiary short name	Country	Date enter project**	Date exit project**
1	Centre national de la recherche scientifique – Institut national de physique nucléaire et de physique des particules	CNRS -IN2P3	France	1	36
2	Projektträger des BMBF für Hadronen- und Kernphysik, Gesellschaft für Schwerionenforschung	PT-GSI	Germany	1	36
3	Bundesministerium für Bildung und Forschung	BMBF	Germany	1	36
4	Istituto Nazionale di Fisica Nucleare	INFN	Italy	1	36
5	Fundación Española para la Ciencia y la Tecnología	FECYT	Spain	1	36
6	Ministerio de Educacion Y Ciencia	MEC	Spain	1	36
7	Fonds de la recherche scientifique	FNRS	Belgium	1	36
8	Fonds voor Wetenschappelijk Onderzoek	FWO	Belgium	1	36

	- Vlaanderen				
9	Institute for Nuclear Research and Nuclear Energy	INRNE	Bulgaria	1	36
10	Commissariat à l'Energie Atomique	CEA	France	1	36
11	Academy of Sciences of the Czech Republic	ASCR	Czech Republic	1	36
12	Helsinki Institute of Physics	HIP	Finland	1	36
13	Greek Secretariat for Research and Technology	GSRT	Greece	1	36
14	National Office for Research and Technology	NKTH	Hungary	1	36
15	University of Groningen (Rijksuniversiteit Groningen)	RuG	Netherlands	1	36
16	Narodowe Centrum Badań i Rozwoju	NCBIR	Poland	1	36
17	Institutul de Fizica si Inginerie Nucleara Horia Hulubei	IFIN-HH	Romania	1	36
18	The Science and Technology Facilities Council	STFC	United Kingdom	1	36

A.3 Budget breakdown form (copy of A3.2 form of the GPFs)

Participant number in this project	Participant short name	Estimated eligible costs (whole duration of the project)				Total receipts	Requested EC contribution
		Coordination / Support (A)	Management (B)	Other (C)	Total A+B+C		
1	CNRS - IN2P3	30,560.75	208,598.14	0.00	239,158.89	0.00	213,250.00
2	PTGSI	213,925.24	18,504.67	0.00	232,429.91	0.00	207,250.00
3	BMBF	0.00	0.00	0.00	0.00	0.00	0.00
4	INFN	198,224.30	25,233.65	0.00	223,457.95	0.00	199,250.00
5	FECYT	148,037.38	37,009.35	0.00	185,046.73	0.00	180,000.00
6	MEC	48,224.30	3,364.49	0.00	51,588.79	0.00	46,000.00
7	FNRS	13,177.57	3,364.49	0.00	16,542.06	0.00	14,750.00
8	FWO V	12,057.48	3,078.51	0.00	15,135.99	0.00	14,750.00
9	INRNE	47,943.92	3,364.49	0.00	51,308.41	0.00	45,750.00
10	CEA	76,535.05	5,018.69	0.00	81,553.74	0.00	48,750.00
11	NPI ASCR	16,471.96	4,205.61	0.00	20,677.57	0.00	14,750.00
12	HIP	13,177.57	3,364.49	0.00	16,542.06	0.00	14,750.00
13	GSRT	48,785.05	3,364.49	0.00	52,149.54	0.00	46,500.00
14	NKTH	50,943.92	3,364.49	0.00	54,308.41	0.00	48,750.00
15	RuG	47,943.92	3,364.49	0.00	51,308.41	0.00	45,750.00
16	NCBiR	47,943.92	3,364.49	0.00	51,308.41	0.00	45,750.00
17	IFIN-HH	13,177.57	98,130.84	0.00	111,308.41	0.00	99,250.00
18	STFC	22,511.68	5,747.67	0.00	28,259.35	0.00	14,750.00
TOTAL		1,049,641.58	432,443.05	0.00	1,482,084.63	0.00	1,300,000.00

PART B

B1. Concept and objectives, contribution to the coordination of high quality research, quality and effectiveness of the coordination mechanism and associated work plan

B 1.1 Concept and project objective(s)

As the field has developed, so has the **complexity of the accelerator facilities** and detectors. Many modern accelerator facilities are now at the stage where they are too large for university groups and instead are housed in national research centres. Generally **these facilities attract international user groups**. Similarly the detectors are now so complex that their **cost and technical demands often require the finance and expertise from several international groups** for their construction and operation.

Europe currently operates **a complementary set of facilities** for nuclear structure and hadron physics, which are networked by two **Integrated Infrastructure Initiatives (**I3's) funded in FP6. These are operated by national laboratories or universities and over the next decade a number of these will see major upgrades.

Within Europe the challenge is to merge the national programmes in Nuclear Physics in order to create a **stronger** and more **cohesive** research activity which is truly European in scope. To achieve this, two conditions are required:

- Firstly, an independent assessment must be made of the field, highlighting the growth areas and identifying the key technical and instrument developments that are required to address these.

Europe is fortunate that the first of these conditions is already covered**. NuPECC (Nuclear Physics European Collaboration Committee),** an Expert Committee of the ESF (European Science Foundation), plays a crucial role in providing independent views on the direction of nuclear physics within Europe, in the form of periodic Forward Looks (Long-Range Plans). Over a number of years, NuPECC has gained the respect of the European nuclear physics community, and its authority is now recognised by the Commission, the national Funding Agencies and, most recently, by ESFRI (European Strategic Forum for Research Infrastructures).

- Secondly, the current funding procedures, where groups are funded by separate national funding agencies that reflect national priorities, have to be given a strategic direction to help align some of the national decisions to the common goals.

What is required now is that Europe puts in place a mechanism to meet this second condition, the effective co-ordination of national funding procedures to meet the common agreed priorities on infrastructure and R&D investment. This ERA-NET proposal aims to meet this challenge.

Indeed, through the NuPECC Forward Look process Europe has an effective mechanism for identifying the growth areas and opportunities in nuclear physics research and the facilities and instruments required to achieve these, **Europe lacks an effective mechanism to coordinate national funding resources** to achieve these identified goals. The aim of the ERA-NET is to provide this mechanism by enabling the national funding agencies to come together to find ways to **pool resources for the projects (new facilities or instrumentation)** to which each country intends to participate.

The ESFRI roadmap has paved the way towards a better coordination of funding for the Research Infrastructures of pan-European interest, which today focuses particularly on FAIR and SPIRAL 2

for nuclear physics. The concerned funding agencies shall act pro-actively vis-à-vis the new European context of ESFRI.. As ESFRI foresees a continuous process of updating pan-European research infrastructures, the work to be done in the NuPNET project will also play a positive role through an improved European coordination of the programmes which may lead to projects that will be included in the revised roadmaps of ESFRI.

B 1.2 Contribution to the coordination of high quality research

The agencies taking part in NuPNET are the most important agencies funding nuclear physics RI and associated equipments in Europe.

NuPNET will provide the tool which all the European Funding Agencies that fund nuclear physics research can use to **plan a coherent development** of the subject. There has been a number of bi-national agreements and MoUs which have been established in the past (e.g. UK-France, France-Italy, Germany-France, Poland-France, etc.) but these have usually been for a **specific project** and for a **limited duration**. However, the science and the user community have now outgrown such ad-hoc arrangements and it is time to **establish an effective mechanism** where the full range of activities in the field can be covered.

It is clear that the next generation of facilities in Europe, as exemplified by the recently approved FAIR and SPIRAL2 projects, **have to be fully pan-European ventures.** The user community for FAIR is of the order of 2,500 and that for SPIRAL2 around 600. Also smaller scale projects undertaken at national laboratories (such as SPES) are of vital importance for the European project EURISOL. In addition, the next generation of detector systems, as exemplified by the AGATA / CBM / PANDA projects or others, are also of a pan-European scale (several tens of groups from 10-15 countries). A strong effort in theory is also required to support the experimental investigations. The European Centre for Theory in Nuclear Physics and Related Areas (ECT*) plays a central role in this respect by hosting workshops devoted to emerging topics in theory, related to new experimental developments. ECT* is thus as essential a "facility" as the experimental laboratories.
NuPNET will enable representatives of the different funding bodies to agree where their national interests overlap and provide an opportunity to explore how a **greater science delivery** can emerge from targeting pooled funding.

The ERA-NET is in an excellent starting position to contribute to the realisation of the scientific objectives of the scientific community, as one of the main goals of NuPNET is to provide the means to **map** the science goals for Europe, which are set out in the NuPECC Long Range Plans, into **practical projects which bring together the funding streams from different national bodies**. The Project consortium does not plan to define the scientific objectives of the European nuclear physics community through another "Long Range Plan" on its own, but foresees instead to use that of NuPECC, NuPNET does not run the risk to fund projects not really needed by the scientific community.

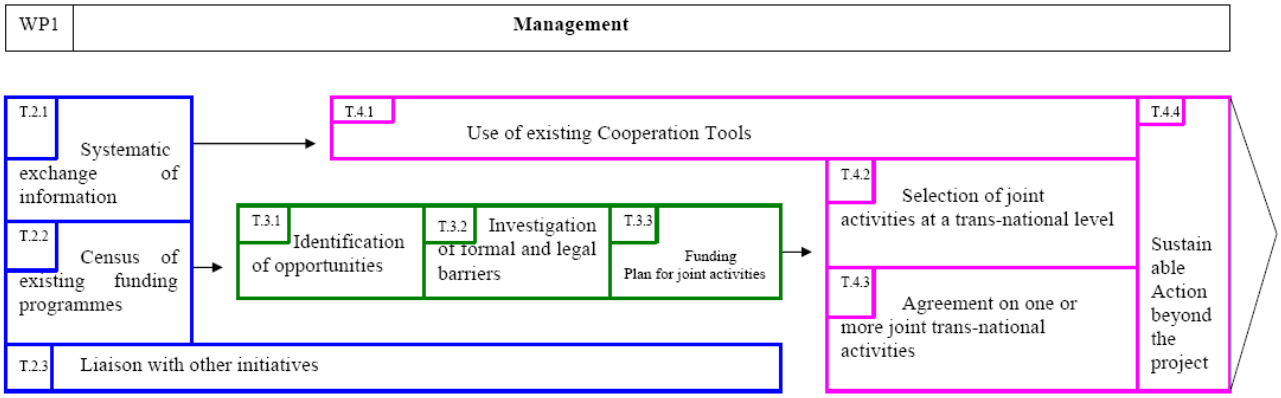
B 1.3 Quality and effectiveness of the coordination mechanisms and associated work plan

B 1.3.1 Overall strategy and general description:

The goals set by the Consortium are these:

- **Goal 1:** acquire a mutual and better **understanding of the Funding systems** of nuclear physics infrastructures and associated equipments in Europe that is needed for future collaborations. The communication between administrators in Europe needs to be intensified in order to effectively develop infrastructures of a fully European scope.
- **Goal 2: Propose** a set of joint trans-national activities (based on the science priorities set in the Long range Plan of NuPECC) that can be launched by Funding Agencies thanks to the NuPNET coordination
- **Goal 3: Launch** one or more of those proposed joint trans-national activities in the field of nuclear physics Infrastructures
- **Goal 4:** Provide Europe with a **sustainable scheme** beyond the project duration.

Below are presented major links between some tasks, which draw the overall picture of the project and which could be summarised as follows:
T2.2 is the major input to WP3, of which T3.3 is the major input to T4.2, of which major outcome is T4.3.



Overview of NuPNET work plan

Key mechanisms:

The Work plan of NuPNET follows the general ERANET scheme, and applies a three step approach. The structure of the Work-packages reveals this logical phasing of the work.

The first Work-package (WP) is of a transverse nature, and should be used as a support to the coordination work-packages. It is composed of pure management activities (Task 1.1) and of more general organisation of the consortium (Task 1.2) with the Co-ordination Committee being a core group who is in charge (under the coordinator direction) to achieve the goal of NuPNET and is capable of quick reactions if required. The communication (Task1.3), included in this transverse

WP, shall be thought to fulfil two objectives. On the one hand, it will develop and provide the electronic tools the consortium requires for of its objectives. Its second sub-task aims at developing an external visibility of the Project and its achievements.
Each project involving such a consortium is to be organised in such a way that the access to information can rapidly be assured thanks to electronic tools. NuPNET needs to start with a necessary exchange of information between Funding Agencies (Task 2.1). To achieve this goal set in WP2, Task 1.3 must have delivered a functional electronic tool in the first six months of the project. The first major milestone is the operating of tools.

The exchange of information (Task 2.1) is organised to achieve the **Goal 1** of our project. NuPNET does not consider itself as only a "forum for discussion", it intends rather to use tangible mechanisms (such as questionnaires) to provide European funding agencies with the necessary quality of the collected information. The extensive communication between administrators is to be organised around a few open days that allows the Agencies to compare their respective experiences and environments. In order to provide the Funding Agencies with the most accurate picture of the European Research Area, the mutual learning is extended to other EU projects on infrastructures and other initiatives (ESFRI, etc.) and it has also been foreseen to leave the door open to any Funding Agency that could not join the Consortium but may want to be associated to the Project progress (2.3).

> Of course the question of the scope of information that will be requested and of how detailed this information has to be will be determined by the Consortium with regards to the requirements of the project.

The exchange of information in T2.1 will help to develop the mutual understanding between the funding agencies concerning their structures, funding modalities and administrative procedures and needs some time to achieve it; it is essential background information since we aim to develop common procedures and standards for joint activities.

But already by the end of Year 1, we need the task 2.2 to focus on issues that are directly needed to propose a list of joint activities: in particular, T2.2 will permit to deliver a *census* of existing national funding programmes which will be analysed in task 3.1 in order to identify a list of opportunities of possible joint activities.
Investigating the possibility to collaborate on Infrastructures will certainly underline the formal and legal barriers we are facing today, and therefore task 3.2 anticipates to deliver its analysis on these barriers and some proposals to try to overcome them at the mid-term of the project. After working on common evaluation procedures and standards for common trans-national projects (3.3), all the elements will be ready for proposing a Funding Plan for Joint activities,. We believe this stepwise approach through the three tasks of WP3 is an adequate way to achieve our **Goal 2,** namely to have the main Funding Agencies in Europe discuss all together and agree on the identification of joint activities.

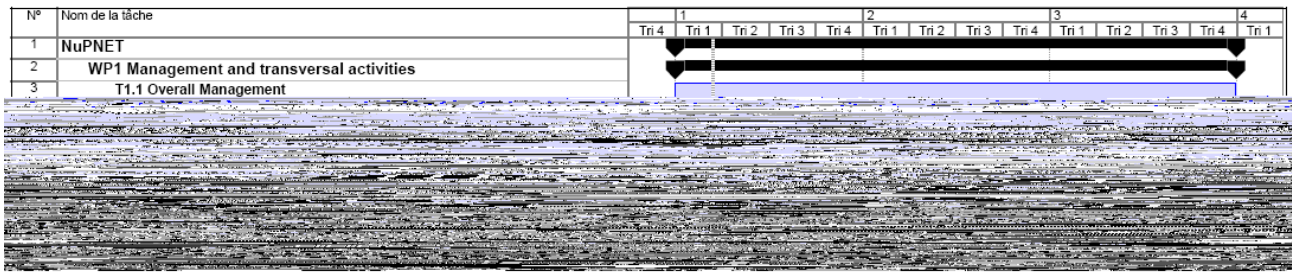
The definition of joint activities developed in the corresponding deliverable of T3.3 is a unique guidance on methods of aligning our practices. But as the scientific community needs more than only administrative recommendations, Work-package 4 will aim at launching one or more pilot activities selected from the list of opportunities defined in T3.3. The pilot activity(ies) should provide the concrete results which are truly required by the scientific community and will have been achieved by the Funding Agencies in a common effort (**Goal 3**).

These concrete activities can either start with trying to open or extend the existing frameworks for cooperation (agreements already in place between some NuPNET partners). The investigation to best use these agreements to reach objectives of a true European scale is the purpose of the task T4.1. This is a first step which can lead to interesting successes. Nevertheless, it is our belief the current cooperation tools are not sufficient, while the ERANET provides the possibility to make joint trans-national activities otherwise impossible. Therefore, as soon as the identification of possible joint activities has been agreed (Goal2), the next step consists in selecting some of these for which a concrete action can be launched within the scope of the three year project (T4.2). We are aware that different partners may have different interests and NuPNET foresees therefore to adopt variable geometry for the benefit of the joint trans-national activities. The best level of participation will be targeted in their launching (T4.3).
The last year of the Project is thus organised in a logical series of meetings that clearly corresponds to the steps towards a successful implementation. At this stage where all preparatory work has been produced by the various task leaders, only meetings can ensure that the whole consortium in the decision making process. The second Governing Council (foreseen by the middle of the third year) should pave the way to launch the activities by the beginning of fall 2010 (or Month 33).

Based on the deepened mutual understanding of the agencies and the experiences gained so far in the project, the last six month of the ERANET will also be used to form a framework in which the collaboration between funding agencies and the trans-national coordination of funding can be continued and further developed. A special final Task (T4.4) will ensure that discussions are widely made to find the most effective way to continue the work. Indeed, not all joint trans-national activities that are required by the scientific community can fit into the pilot activity implemented in the end of a three year project. Hence our **Goal 4** to continue beyond the project is not only a way to continue on the same level, but also a chance to lay down the basis for deeper cooperation. The creation of a permanent cooperation group or equivalent will be discussed in T4.4 to find out the best framework to continue working together.

As it has been already mentioned, WP1 acts as support to the other WPs, so that each of its Tasks is linked to the other tasks.

B 1.3.2 Timing of work packages and their components



B 1.3.3 Work package list / overview:

Work package No	Work package title	Type of activity	Lead beneficiary No	Person-months	Start month	End month
1	Management	MGT	1	58	1	36
2	Information exchange	COORD	2	58.5	1	36
3	Definition of joint activities	COORD	4	46	4	24
4	Launching of joint activities	COORD	5	60.5	13	36
	TOTAL			**223**		

B 1.3.4 Deliverables list:

Del. no.	Deliverable name	WP no.	Lead beneficiary	*Estimated indicative person-months*	Nature	Dissemination level	Delivery date (proj. month)
D1.1	Short Management plan (explanatory guide for partners)	1	1	2	R	PU	2
D1.2	Communication plan and logo	1	17	3	R	PU	3
D1.3	Report to the European Commission (Financial statements)	1	1	21	R	PP	19
D1.4	Short report on communication	1	17	12	R	PP	36
D1.5	Report to the European	1	1	20	R	PP	36

	Commission (Financial statements)						
D2.1	Census of existing funding programmes	2	2	22	R	RE	12
D2.2	Compilation of the results of the questionnaire	2	13	16.5	R	RE	24
D2.3	Short report on liaison activities	2	15	20	R	PP	36
D3.1	List of opportunities	3	4	14	R	PP	18
D3.2	Report on formal and legal barriers	3	16	11	R	PP	18
D3.3	Funding Plan for joint activities	3	10	21	R	PU	21
D4.1	Report on the possible use of cooperation tools	4	9	14	R	PP	24
D4.2	Short report on the selection of joint trans-national activities	4	5	11	R	PP	27
D4.3	Report on the transnational agreement for the selected pilot projects	4	5	21.5	R	PP	36
D4.4	Plan for continuation of coordination beyond the project lifetime	4	14	14	R	PU	36

B 1.3.5 Work package descriptions:

Work package number	1	**Start date or starting event:**			1	
Work package title	**Management**					
Activity Type	MGT					
Participant number	1	17	5	2	4		TOTAL
Person-months per participant:	36	12	6	1	3		58

Objectives:
- Adequate Management of the Project and overall Co-ordination of the Consortium
- Adequate Outreach to the scientific Community and to decision makers at national level
- Providing reactive and adequate electronic tools to Funding Agencies to establish a sustainable and necessary communication, exchange of good practices and cross-fertilisation among European Funding Agencies

Description of Work – Work-package Leader (IN2P3)
The ERA-NET administration will be composed of three transverse tasks. The Overall Management Task, for which the Project Co-ordinator is responsible, will ensure the Consortium manages to provide the European Commission with all financial and legal documents, and all contractual obligations are respected. The major decisions in this domain of the Project are taken by the Governing Council.
The Project Co-ordination, for which the Co-ordinator (with the help of the dedicated Co-ordination Committee) is responsible, is dedicated to ensure the best coordination within the ERA-NET, and a relevant organisation of the Consortium meetings and actions. This activity is essential to a proper follow-up of the progress, required for an adequate management of the project.
The Communication Task is devoted to develop electronic tools for the Work-Packages of the Project, manage their running and support the best use of these tools and dissemination required. These three tasks have been thought as support tools for the other WPs, which can then really focus on their very content.

Task 1.1 Overall Management of NuPNET (Task Leader CNRS/IN2P3)
The task leader has the responsibility to:
- provide the overall administrative, financial and legal management of the project
- prepare all partners for the submission of reports
- keep records of all documents produced by partners with regards to the management of the Project

The Coordination Committee helps the Coordinator with:
- collecting all technical and financial information needed to report to the Commission
- organising the timely delivery of reports
- ensuring a good communication between the Commission and the Consortium

The Governing Council participates in the management of the Consortium as it:
- reviews every deliverable sent
- discuss about major strategic issues

The Governing Council decides on strategic issues and meets at least twice (on the management budget).

Task 1.2 Overall Co-ordination of the Consortium (Task leader CNRS/IN2P3)
The Project Manager and the Project Co-ordinator are expected to:

- organise the Kick-off Meeting
- keep track of the progress of each work-package
- prepare the meetings of the Co-ordination Committee

The Co-ordination Committee has to:
- organise the co-ordination between work-packages
- produce minutes with a view to informing the Governing Council on the progress of the other tasks
- pilot the project on a daily basis

Task 1.3 Communication and electronic tools (Task leader IFIN-HH)

This task will be basically devoted to manage all internal and external communication, to set up a website with both an open and a confidential part (only open to partners), and to organise the appropriate dissemination of deliverables.

The private part will include project monitoring tools and provide all relevant information for the implementation of the NuPNET project. This means Task 1.3 will be a required input for the development of the information exchange of WP2.

- Maintaining a website dedicated to the project with private and public accesses
- Maintaining a document system management for the project reports, deliverables (where appropriate) and other relevant documents: this includes close collaboration with WP2, which needs the framework for a database put in place by T3.1 task leader.

The definition of Communication and Outreach activities will be précised in the Communication Plan, defining the activities and setting measurable objectives to monitor the impact (reported every 18 months).

Deliverables

T0+2: D1.1 Short Management plan (explanatory guide for partners)
T0+3 : D1.2 Communication plan and logo
T0+19: D1.3 Report to the European Commission (Financial statements)
T0+36: D1.4 Short report on communication
T0+36 : D1.5 Report to the European Commission (Financial statements)

Work package number	2	**Start date or starting event:**			1		
Work package title	**Information exchange**						
Activity Type	COORD						
Participant number	2	13	15	5	1	All others	TOTAL
Person-months per participant:	36.5	6	6.5	3	1	0.5 each	58.5

Objectives

- establish consultations between national and international funding agencies for European nuclear physics
- establish a census of funding budgets and priorities
- establish a mechanism for regular consultations between NuPNET and related European networks, I3 consortia, and Design Study projects in nuclear physics as well as related ESRFI and OECD fora; and collaborate with potential associated Funding Agencies

Description of work

This work package aims at establishing the framework for a durable collaboration between agencies related to nuclear physics infrastructures and comprises the following tasks:

- **Task 2.0: Coordination of the WP2** (Task leader Partner 2, PT-GSI)

The Work Package leader will ensure the overall coordination of the tasks in this WP and together with the other WP leaders will take care of an effective interaction between the WPs. The WP leader will also make contact with the Coordinators and when needed with the WP leaders of the ERANETs of neighbouring fields such as ASPERA and Astronet to ensure that efforts being made, especially in Task 2.1 and 2.2, will not be duplicated and to optimise potential synergy effects.

- **Task 2.1: Systematic exchange of information on funding modalities and administrative procedures** (Task Leader: Partner 13 - GSRT)

This task aims at establishing a framework for systematic exchange of information between ministries and funding agencies (including potential associate partners) on funding modalities and administrative procedures.

The first step will be to establish a common information exchange scheme among the agencies. An important step to achieve this will be a kick-off workshop jointly organised with Task 2.2. There, the agencies will collectively define the criteria of and their expectations for a study on funding modalities & administrative procedures (this task) and on nuclear physics national budgets and priorities (Task 2.2). The study will concentrate on information related to nuclear physics research infrastructures. A questionnaire will then be developed and launched to the participating agencies.

In order to make this exchange permanent throughout the duration of the NuPNET activities joint communication tools (web site and database) will be established as a part of the overall NuPNET web site (Task 1.3). The participants of this task will work in close cooperation with Task 1.3 to define the needs and the structure of the website and this database.

The deliverable will be a compilation of the results of the questionnaire focussing on funding modalities, administrative procedures and national research policies (and will thus cover a different scope as the deliverable of Task 2.2).

Moreover a number of agencies yet to be selected will organise "administrative open days" for the

members of the consortium (about 2 such meetings). The administrators will thus gain important knowledge of programmes, administrative responsibilities and general procedures in science funding (counselling, proposals, peer review, grant decision, financing, contracts and follow up) as well as of national research policies, functions and responsibilities, missions and guidelines of the different national agencies.

- **Task 2.2: Census of present European nuclear physics agents and resources** (Task Leader: Partner 2, PT-GSI)

The goal is to establish a census of present European nuclear physics resources, including institutions, personnel, training, existing programmes, evaluation procedures, financing, equipment, access to Infrastructures, concentrating on information related to nuclear physics research infrastructures. Task 2.2 will concentrate its effort on the production of a census (due in Month 12) to be directly used as the major input of data to the planning action of WP3.

While some information is already available, such as a survey by NuPECC on personnel (in 2005) or by IUPAP on Research Infrastructures and needs to be complemented only in a few cases (e.g. Bulgaria non-NuPECC country), the mutual knowledge on financial resources, existing funding programmes, organisational and administrative structures and procedures, national research policies, functions and responsibilities, missions and guidelines of the different national agencies is still substantially absent.

Another needed information is the present status of technical competences and specialities related to maintenance, R&D and projects in the existing infrastructures staff and associated laboratories in the field. This issue is important to ensure continuity in the recruitment of accelerator specialists and related technologies for present and future of RI in EUROPE. Collecting and updating information on existing programmes and financial resources will be in the focus of this task, including national assets in inter-European and Intercontinental multi-lateral actions, bodies and infrastructures. This census will be an essential input to WP3, Task 3.1.

The deliverable (Month 12) will concentrate on the information directly necessary to the Funding Plan for joint activities (and is thus substantially different from deliverable of task 2.1).

- **Task 2.3 Liaison with the nuclear physics community at large (EC funded projects, NuPECC) and other European and International Initiatives (ESFRI, OECD, IUPAP) as well as non-partner funding agencies** (Task Leaders: Partner 2 – PT-GSI and Partner 15 - RuG)

The aim is to establish a discussion process between NuPNET and the nuclear physics community at large as well as other relevant European and International Initiatives such as ESFRI, OECD Nuclear Physics Working Group and the IUPAP Committee on International Cooperation in Nuclear Physics.

This information exchange will include (not exhaustively listed here) projects such as :

- bottom-up multinational initiatives as ECT*
- Integrated Infrastructures Initiatives (I3), like I3HP, EURONS, EUROTRANS, CARE
- FP6 Infrastructure Design Studies, like GSI-FAIR, EURISOL
- FP6 Infrastructure Construction Projects like GSI-FAIR
- as well as their planned follow-on projects under FP7, presently under preparation

For the EC funded projects, the task leader will initially make contact with the corresponding Scientific Co-ordinators and discuss the NuPNET programme with them. A key task of these discussions between the Task leader and the Scientific Co-ordinators will be to develop a balanced

overview of the activities within each of these projects and NuPNET. This will ensure duplication is avoided and effort is optimised. The conclusions will be proposed to the relevant Boards for endorsement. Representatives of relevant ESFRI, IUPAP and OECD working groups will be invited to participate and will be informed about the conclusions of these discussions. These discussions will also consider what further actions are necessary within this forum to establish stable and longer-term interactive mechanisms.

Another aim is the integration of new associates in NuPNET. While the participants of NuPNET provide a large share of the funding for nuclear physics in Europe, all of European nuclear physics must be involved in defining the strategic plans which are the key aim of NuPNET. Already during the proposal phase of NuPNET all relevant bodies in Europe have been informed of the NuPNET initiative and have been invited to join as full participants. This will allow them to have full impact on NuPNET's activities. At the same time, we invite any national funding agency or scientific society to become an Associate of NuPNET at any stage of the project.

The associate status to be defined in this Task would allow these agencies to participate in discussions and future plans and thus prepares them (if requested) for a full partnership in a possible ERANET plus action.

Deliverables (brief description and month of delivery)

T_0+12: D2.1: Census of existing funding programmes
T_0+24: D2.2: Compilation of the results of the questionnaire
T_0+36: D2.3: Short report on liaison activities (for T2.3)

Work package number	3	**Start date or starting event:**			4		
Work package title	**Definition of joint activities**						
Activity Type	COORD						
Participant number	4	16	10	5	1	All others	TOTAL
Person-months per participant:	23.5	6.5	6.5	3	1	0.5 each	46

Objectives

- Identify opportunities for the Funding Agencies to pool resources
- Find the best formal and legal framework for a trans-national cooperation
- Propose a Funding Plan defining joint activities, that gathers the results of the precedent tasks

Agreeing on a Funding Plan for Joint activities, **for Nuclear Physics Infrastructures to help implementing the science vision of NuPECC.**

In order to produce plans related to Research Infrastructures based on the Long Range Plan of nuclear science prepared by NuPECC, one has to answer questions of both administrative and technological nature. The task leader will interact with agency representatives and with the teams that developed the Science Vision.

The ultimate goal of this working group is to propose projects where a coordinated funding is appropriate and a "list of actions" to be further transformed into pilot transnational projects already by WP4 with a proposed methodology to do so.

• **Task 3.0: Co-ordination of the WP3** (Task Leader Partner 4 - INFN)

The Work Package leader will ensure the overall coordination of the tasks of the present WP. In addition, together with the other WP leaders, T3.0 will take care of an effective interaction between the WPs. The WP leader will also be in contact with the Coordinators and if needed with the WP leaders of the ERANETs of neighbouring fields such as e.g. ASPERA and ASTRONET. This aims at optimising potential synergy effects and to avoid duplication.

Task 3.1: Identification of opportunities for NuPNET (Task Leader Partner 4 - INFN)

The analysis of the existing scientific national programmes of the different agencies for Nuclear physics shall lead to the identification of a set of projects that the funding agencies in the ERAnet might fund. The Census of WP2 will be used as an essential input for this discussion. To define a commonly accepted identification criteria it will be necessary to compare the scientific programmes and national priorities associated with laboratories or collaborations of individual researchers. In general, the nuclear physics priorities are within a more general planning including several other physical sciences, and are determined by some funding conditions and prerequisites. To have a complete view it is important to investigate if there are more than one organisation in the partner's country funding the same subfield. Can some aspects of the research receive private funds to match public resources?

The detailed analysis of the current funding systems must be followed by a discussion of the quality and of the level of involvement and participation in the research programmes. These aspects are important and have to be used among the criteria to arrive to the identification of opportunities.

The deliverable (Month 18) shall be a list of opportunities for NuPNET joint activities (open to

possible future activities beyond NuPNET duration). This will constitute the first part of the Action Plan.

- **Task 3.2: Identification and tackling of formal and legal barriers to launching joint activities** (Task leader Partner 16 – NCBIR)

Based on the census on the status of research processing and funding on national level (WP2) programme managers and administrators can discuss how national nuclear physics programmes are run in order to identify formal and legal barriers that may hinder pan-European cooperation. Legal, institutional and organisational aspects need to be well understood in order to be able to develop procedures and rules which are compatible with national systems.

This task of WP3 has to go beyond existing bilateral agreements. As common strategic activities are not only the construction of new infrastructures but also the creation of links between existing infrastructures, existing infrastructures can thus play a major role in connection with specific technical and scientific aspects related to the activities at the new infrastructures.

The task leader will form a core group working on:

- The *set up of participation*, operational and administrative issues of the joint activities (sharing of investments costs based on commonly agreed cost models , operation costs , co-financing new instruments , movable large array of detectors from one place to others,…)
- the preparation of the legal aspects (based for instance on the current work on the subject, like "Legal forms of research infrastructures of pan-European interest", report released by the ESFRI)
- and of financial models.

In this activity it will be important to benefit, when possible, of some of the accomplishments achieved in this connections by other ERANETs.

The activity of this task is preparatory to WP4 since it should lead to advice or good practice for a European funding of nuclear research infrastructure by national Agencies.

The deliverable (Month 18) will be a report showing the identified issues to be solved in order to ease the cooperation of funding agencies in the specific field of Nuclear Physics infrastructures. It will be the second input to the final deliverable of WP3, the Funding Plan for joint activities

Task 3.3: Funding Plan for joint activities
(Establish common evaluation procedures and standards for common trans-national projects within a Funding Plan for infrastructures of nuclear physics) (Task leader Partner 10 – CEA)

Sub-Task 3.3.1: Finalisation of the Funding Plan for joint activities

In order to be able to carry out coordinated activities on European level, Task 3.3 active members will provide NuPNET with a strategy how to implement joint activities and when applicable, creating calls and with common evaluation procedures and standards for the joint activities of WP4. The outcome of this work will consist in proposals (to be part of the Funding Plan for joint activities) concerning the structure and strategy for the creation of calls, evaluation, reviewing, funding and management of pan-European nuclear physics projects and infrastructures, i.e. the Funding Plan for joint activities (equivalent to a Roadmap for funding Infrastructures of nuclear physics). These tools shall be used to create a scheme for a coordinated activity based on national funding resources and when possible including a European wide call for proposals with a common evaluation if this option is proven to be appropriate by the work of WP3. Given the costs and requirements for manpower in future laboratories and experiments these standards are urgently needed and will provide a toolbox for a future common action on infrastructures.

Sub-Task 3.3.2: Proposal of the Funding Plan for joint activities to the Funding Agencies

Finally the Task 3.3 will have the mission to have the Open Funding Plan for joint activities that defines our joint activities and which is accepted officially by the largest number of countries possible. This requires an effort on outreach towards all relevant stakeholders and therefore the help

of Task 1.3. Meeting with important political decision makers and the organisation of a general meeting to approve the NuPNET Funding Plan for joint activities will help to create the widest consensus on the result of NuPNET WP3 among the agencies and provide the network with the legitimacy necessary to the foreseen launching, which is planned in WP4.
To optimise the effectiveness of WP4, each partner has to be actively working with its national decision makers. Each partner has an effort budgeted to show this crucial commitment.

Deliverables

T_0+18: D3.1: List of opportunities for NuPNET joint activities (and possibly beyond)
T_0+18: D3.2: Short report on formal and legal barriers
T_0+21: D.3.3. Funding Plan of the joint activities

Work package number	4		**Start date or starting event:**			12
Work package title	**Launching of joint activities**					
Activity Type	COORD					
Participant number	5	4	9	14	6	All others	TOTAL
Person-months per participant:	24	11.5	6.5	6.5	6	0.5 each	60.5

Objectives

- Selection of trans-national joint activities from the action plan proposed in WP3
- Define procedures for implementing common European activities in nuclear physics infrastructures
- Launch one or more pilot trans-national activity(ies)
- Establish a sustainable action beyond this project

Description of work

The goal of this work package is the concrete launching of targeted coordinated initiatives based on the action plan proposed in WP3. These initiatives will be related to the construction or exploitation of scientific infrastructures and will be based on a series of agreements to promote R&D on specific topics, construction of new facilities or scientific equipment, or exploitation of existing facilities. This process should then be turned into the launch of one or more trans-national joint activities having a joint budget in the field of nuclear physics.

The first step will be the definition of the legal frame cooperation. This legal frame could consist on the possible extension of already existing trans-national cooperation agreements between European partners in nuclear physics as identified in WP2, or new agreements for the proposed joint activities. Then, new mechanisms and partners should be proposed towards the implementation of the selected joint activities. A pilot coordinated trans-national joint activity shall be prepared. Finally, the continuation of these trans-national activities beyond NuPNET needs to be investigated.

The task leaders in this work package will be responsible for organising visits to the funding agencies and a meeting with all partners to from the list of opportunities proposed in WP3 one or more pilot activities to be launched within this ERANET project and to decide on the concrete actions that are necessary for their implementation.

Task 4.0: Co-ordination of the WP4 (Task Leader Partner 6 – MEC, helped by Partner 4 - INFN)

This task ensures the overall synergy within the fourth Work package. Together with the other WP leaders the task leader will take care of an effective interaction between the WPs.

• **Task 4.1: Existing cooperation tools** (Task leader: Partner 9 - INRNE)

The presently existing bilateral agreements between NuPNET partners could represent the first stage towards the implementation of joint trans-national activities in nuclear physics. The aim of this task is to investigate the possibility of extending the existing agreements identified in WP2 in order to

include some of the joint activities proposed in the action plan of WP3, as well as new partners not yet parties of these existing agreements. Otherwise new legal frames need to be proposed.
Some visits to key funding agencies and the information obtained in the census of WP2 are needed to accomplish this task. The deliverable of this task will be a report on existing bilateral or multilateral agreements between NuPNET partners, their possible interactions or new legal frames required, and the results achieved in trying to extend their use to a European scale -or at least for the projects identified commonly in WP3.

- **Task 4.2: Selection of joint activities at a trans-national level** (Task leader: Partners 5 &6, FECYT & MEC, Spain)

Based on the action plan produced in WP3, a discussion between administrators, senior scientists and the directorate of participating agencies will aim at selecting one or more activities from the action plan proposed in WP3 and deciding on a concrete implementation plan for the selected joint activities. The selected joint activities will be related to the construction or exploitation of scientific infrastructures. A group of experts should evaluate the different joint activities proposed in WP3 and define the time scale and the human and economical resources required for their realisation. Finally, the selected joint activities shall be turned into new cooperation agreements, or enlarged versions of the existing ones, as defined in task 4.1.
Visits to funding agencies and meeting for the decision are required.
The task leader is responsible for producing one of the milestones of this work package, the agreement on at least one joint activity to be launched within the duration of this project.
The deliverable of this task will be a report describing the actions necessary for the launching of the selected joint activity, including the resources required for their realisation.

- **Task 4.3: Agreement on one or more pilot transnational activity** (Task leader: Partners 5 &6, FECYT & MEC, Spain)

This task aims at preparing and reaching a multilateral agreement on one or more coordinated trans-national activity. Clustering of nationally-funded research projects, the alignment of part of the financial resources of the participating agencies or competitive calls to fund projects related to research infrastructures constitute the mechanisms foreseen for the launching of the joint activities selected in task 4.2.
The preparation of the joint activities will consist on a detailed description of the project proposed and the definition of the budgetary framework. Moreover, in the case of common calls for projects, this task will define the requirements for the applicants, the evaluation procedures, according to task 3.3, the creation of a peer review committee and the creation of application forms. Finally the call should be launched using adequate publication channels.
Due to the large number of partners involved in this project and considering the different national research policies, we foresee a **variable geometry** for the participation in the proposed joint activities. The participation of the partner countries in the joint activities will be funded by their agencies using the best procedure and financial tools identified in Task 3.3 and 4.1.
The deliverable of this task shall be a multilateral agreement of funding agencies for at least one pilot trans-national activity while the milestones shall be the alignment of part of the financial resources of the participating research councils to implement the joint activities and the launch of the joint activity.

- **Task 4.4: Sustainable action beyond NuPNET** (Task leader: Partner14, NKTH)

Although the aim of NuPNET is to define and test tools for trans-national joint activities within the scope of the ERA NET project, our long range goal should be a real trans-national funding of nuclear physics infrastructures in Europe. The definition of a framework for the continuation of NuPNET should be one of the key results of this project. To reach this goal a "**preparatory group**"

shall be created for the future funding of European joint activities. The task leader will be responsible for the organisation of the kick-off meeting of this group.
The goal of this task will be to propose a framework (structure and functions) for the proposed "preparatory group"

Deliverables

T_0+24: D4.1: Report on the possible use of existing cooperation tools
T_0+27: D4.2: Report on the selection of a joint activity
T_0+36: D4.3: Report on the transnational agreement for the selected pilot projects
T_0+36: D4.4: Plan for setting up the "preparatory group" beyond NUPNET

B 1.3.6 Efforts for the full duration of the project:

Template: Project Effort Form 1 - Indicative efforts per beneficiary per WP

Participant no./short name	WP1	WP2	WP3	WP4	Total person months
1. CNRS	**36,00**	1,00	1,00	0,50	38,50
2.PT-GSI	1,00	**36,50**	0,50	0,50	38,50
3.BMBF					0
4. INFN	3,00	0,50	**23,50**	11,50	38,50
5. FECYT	6,00	3,00	3,00	**24,00**	36,00
6. MEC				6,00	6,00
7. FNRS		0,50	0,50	0,50	1,50
8. FWO		0,50	0,50	0,50	1,50
9. INRNE		0,50	0,50	6,50	7,50
10. CEA		0,50	6,50	0,50	7,50
11. ASCR		0,50	0,50	0,50	1,50
12. HIP		0,50	0,50	0,50	1,50
13. GSRT		6,00	0,50	0,50	7,00
14. NKTH		0,50	0,50	6,50	7,50
15. RuG		6,50	0,50	0,50	7,50
16. NCBIR		0,50	6,50	0,50	7,50
17. IFIN-HH	**12,00**	0,50	0,50	0,50	13,50
18.STFC		0,50	0,50	0,50	1,50
TOTAL	*58,00*	*58,50*	*46,00*	*60,50*	***223,00***

NuPNET 202914

Template: Project Effort Form 2 - indicative efforts per activity type per beneficiary[1]

Project number (acronym) : NuPNET

Activity Type	Beneficiary 1	Beneficiary 2	Beneficiary 3	Beneficiary 4	Beneficiary 5	Beneficiary 6	Beneficiary 7
Consortium management activities							
WP 1	36	1		3	6		
Total ' management'	36	1	0	3	6	0	0
Other activities							
WP2	1	36,5		0,5	3		0,5
WP3	1	0,5		23,5	3		0,5
WP4	0,5	0,5		11,5	24	6	0.5
Total 'other'	2.5	37.5	0	35.5	30	6	1.5
TOTAL BENEFICIARIES	38.5	38.5	0	38.5	36	6	1.5

Activity Type	Beneficiary 8	Beneficiary 9	Beneficiary 10	Beneficiary 11	Beneficiary 12	Beneficiary 13	Beneficiary 14
Consortium management activities							
WP 1							
Total ' management'	0	0	0	0	0	0	0
Other activities							
WP2	0,5	0,5	0,5	0,5	0,5	6	0,5
WP3	0,5	0,5	6,5	0,5	0,5	0,5	0,5
WP4	0,5	6,5	0,5	0,5	0,5	0,5	6,5

[1] Please indicate in the table the number of person months over the whole duration for the planned work , for each work package, for each activity type by each beneficiary

Total 'other'	1.5	7.5	7.5	1.5	1.5	7	7.5
TOTAL BENEFICIARIES	1.5	7.5	7.5	1.5	1.5	7	7.5

Activity Type	Beneficiary 15	Beneficiary 16	Beneficiary 17	Beneficiary 18			TOTAL ACTIVITIES
Consortium management activities							
WP 1			12				58
Total ' management'	0	0	12	0			58
Other activities							
WP2	6,5	0,5	0,5	0,5			58.5
WP3	0,5	6,5	0,5	0,5			46
WP4	0,5	0,5	0,5	0,5			60.5
Total 'other'	7.5	7.5	1.5	1.5			165
TOTAL BENEFICIARIES	7.5	7.5	13.5	1.5			223

B 1.3.7 List of milestones and planning of reviews:

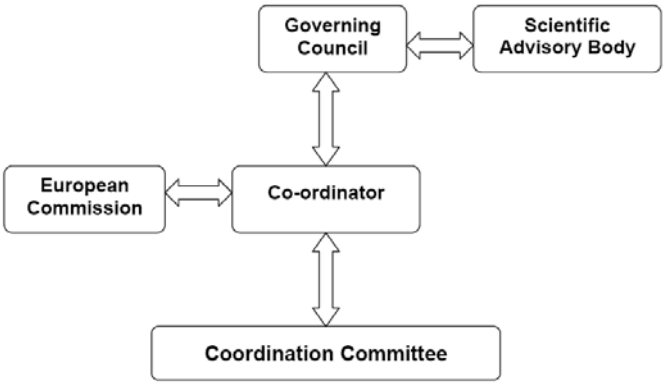
Template: Milestones List and planned reviews

List and schedule of milestones					
Milestone no.	**Milestone name**	**WPs no's.**	**Lead beneficiary**	**Delivery date from Annex I [2]**	***Comments***
M1	Electronic tools operational to support all WPs.	1	**17**	6	Presentation of the tool to partners and start of use (actual use by WP2 to fulfil Task 2.1)
M2	Census of funding programmes delivered	2	**2**	12	Delivery of the corresponding deliverable
M3	General approval of the Funding Plan for joint activities for Europe	3	**10**	24	Formal approval in the General Meeting dedicated to.
M4	Selection of one or more joint activity	4	**5**	27	Delivery of a document
M5	Launch of a pilot trans-national activity	4	**5**	33	Announcement, Communication
M6	Creation of the "preparatory group" for the future managing of European joint activities in nuclear physics infrastructures	4	**14**	35	Delivery of the constitutive document for the group

[2] Month in which the milestone will be achieved. Month 1 marking the start date of the project, and all delivery dates being relative to this start date.

B2. Implementation

B 2.1 Management structure and procedures



NuPNET Governance

A Coordination Action needs bodies that can cooperate easily and through clear procedures. Therefore, the project is managed by the following bodies:

6.1.1 The NuPNET Co-ordinator. *In the proposal, the "Co-ordinator" might refer either to the Co-ordinating Institution or to its Representative. The management of NuPNET is ensured by the Coordinator Representative and the Co-ordination Manager.*
6.1.2 NuPNET Governing Council
6.1.3 NuPNET Co-ordination Committee
6.1.4 NuPNET Scientific Advisory Body

NuPNET **Co-ordinator and the Co-ordination Manager**

The Co-ordinator of the Project is the IN2P3 / CNRS, represented by Prof. Sydney Gales.

Presentation of Sydney Gales and CV are to be found in presentation of CNRS (Cf. #2.2 Individual participants).

The **Co-ordinator** is appointed by the Consortium to:

- act as described by Art. 25 and 36 of the Rules For Participation (Regulation laying down the rules for the participation to FP7 EC (2007-2013));
- sign the contract
- With regard to his responsibilities, the Coordinator may have a veto right on matters discussed in the Governing Council
- ensure the liaison between all NuPNET partners and the Commission, inter alia request for amendments;
- receive the payments from the Commission and distribute them to the partners;
- submit required reports, such as Financial Statements;
- overlook the work of the Co-ordination Committee and the implementation of the Governing Council decisions;
- represent the ERA-NET to the public, i.e. to be the NuPNET Spokesperson;

NuPNET Governing Council

Composition

Each Contractor sends one voting representative to the Governing Council. Only they are referred to hereafter as "Members of the Governing Council" and are authorised to vote.

The Governing Council elects its Chairperson at its first meeting. The Chairperson shall:

- convene the Governing Council meetings;
- set the agenda with the Co-ordinator in accordance with the other Members;
- preside over the discussion

Role

The Governing Council decides on matters related to:

- The strategic decisions related on the execution and development of the NuPNET programme
- The structure and restructuring as necessary of the workpackages
- The inclusion of new members as well as the exclusion or withdrawal of members
- The approval of reports submitted to the European Commission
- The appointment of the workpackages leaders

Moreover the Members of the Governing Council commit to ensure a permanent liaison with their national decision makers, also at the ministry level, when they are not directly working at the ministry level.

Meetings

The Governing Council meets at least twice over the three year duration of the project, and when called by the Chairperson (e.g. on request of the Coordinator).

In addition to the regular Members, the Chairperson invites the Co-ordination Manager and may also invite funding agencies and public bodies interested in joining NuPNET.

NuPNET Co-ordination Committee

Composition

- The Project co-ordinator
- The Manager
- The leaders of the Workpackages. The Workpackage leaders are responsible for the implementation of the Description of Work of their respective Workpackages.

Role

NuPNET Co-ordination Committee Meetings are chaired by the Project co-ordinator, assisted by his/her Manager. The Co-ordination Committee convenes at least twice a year. Extraordinary meetings may be called at any time at the request of the Project co-ordinator. In particular the Committee will:

- Implement the scientific, political, strategic and financial decisions of the Governing Council

- Support the Co-ordinator in fulfilling obligations towards the European Commission
- Receive progress and financial reports from the NuPNET partners
- Propose, when necessary, changes in the work-share, budget and participants to the Governing Council
- Identify problems or strategic issues that need to be referred to the Governing Council and/or the NuPNET Scientific Advisory Body.

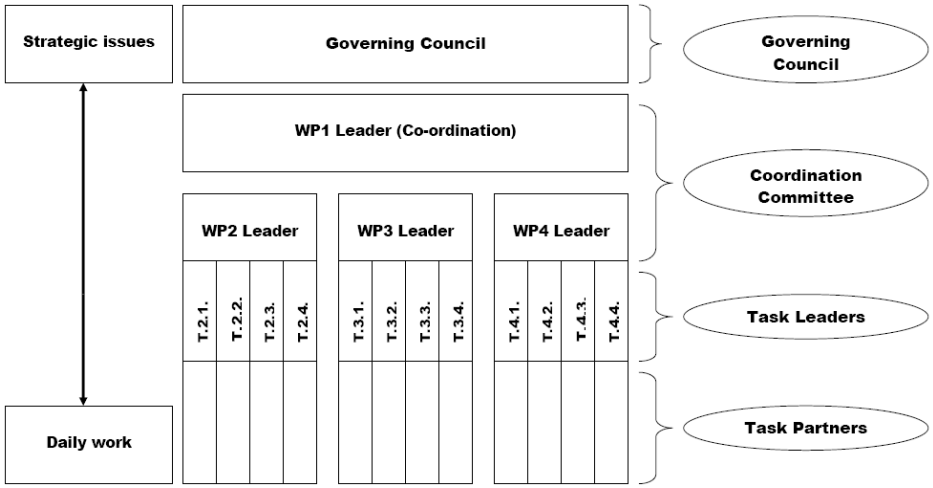
NuPNET Scientific Advisory Body

NuPECC - that is in charge of the elaboration of the European Nuclear Physics long range plan - will advise NuPNET on scientific issues. This is made possible as part of Task 2.3 and as NuPECC can easily be invited to inform the Governing Council of the view of the scientific Community, as foreseen.

The Governance structure

The management of NuPNET is supported by a governance structure that involves the partners at a relevant level.

As shown in this picture below, the decision-making bodies correspond to the nature of the respective subject: only important decisions are made by the whole assembly of high representatives of the Project (Governing Council), whereas only involved partners and the corresponding task leader have the responsibility to ensure the daily work is properly made.



Responsibility tree

B 2.2 Beneficiaries

1 Centre national de la recherche scientifique – Institut national de physique nucléaire et de physique des particules (CNRS -IN2P3), France

Type of organisation and fields covered:
- public research organisation established for fundamental research
- under the administrative supervision of French Ministry for research.

Budget:
- **2300 M € in 2006**; including 309 mio. € generated by CNRS.

History and organisation:
- CNRS will be the coordinating partner of the ERANET-NuPNET proposal and has already large experience in managing and coordinating EU projects -among many others, Coordinator of the **ERANET - *ASPERA***
- 28,800 permanent employees
- The institute IN2P3 (Institut National de Physique Nucléaire et Physique des Particules), is responsible for research in Particle Physics, Nuclear Physics and Astroparticle physics

Budget for Nuclear Physics and related research:
- budget of the Nuclear Physics department in investment and running expenses 19.5 MEuros and 49M€ for salaries. Additional 5M€. come for contracts with the European Union, industries and regional collectives. Most of the investments and running expenses in Nuclear Physics are attributed to GANIL accelerator facility which play the role of an International Research Infrastructure run jointly by CEA and CNRS and to 20 different university laboratories associated with CNRS, representing on the average about 60 research groups.
- Main tasks: 1.1 & 1.2

the coordinator:

The Coordinator **is currently Deputy Director in charge of Nuclear Physics at CNRS/IN2P3 and Director of GANIL.**

2 Gesellschaft für Schwerionenforschung mbH (PT-GSI) Germany
3 Bundesministerium für Bildung und Forschung (BMBF) Germany

Type of organisation and fields covered
- The Federal Ministry of Education and Research (BMBF) promotes in Germany science and technology in essentially all fields. It is the major funding agency for Nuclear Physics in Germany
- GSI is a public research organisation for research in nuclear physics and is one of the major research operators in the field in Europe. The GSI department Projektträger GSI (PT-GSI), which contractually belongs to the German network of executive agencies running science and technology projects on behalf of the BMBF, is the project management organisation for hadron and nuclear physics. *Thus GSI is not participating in this ERANET in the role of a research institution but in its role of a funding agency acting on behalf of BMBF.*

History and mission:

The BMBF performs many different tasks at national level within the framework of its competences under the Basic Law. The BMBF supports research through:
- The promotion of basic research and the respective organisations working in this field (in conjunction with the Länder).
- The promotion of key technologies particularly in the fields of health research, biotechnology, information technology, ecological research and mobility, research and development for employment and innovative work, transport and aerospace, and marine technology.

- The promotion of state preventive research in the fields of the environment, climate, ecology and health, the promotion of marine and polar research, research and development to improve working conditions, research into education and training, and research in the field of the humanities and the social sciences.

Budget for hadron and nuclear physics related research by Bund and Länder: approx. 200 M€ in 2002; about 90% of this budget is allocated to institutional funding (HGF, CERN, ILL, MPG, WGL, Universities), about 10% to project funding (through DFG (4%) and PT-GSI (6%)).

Main tasks: WP2, in particular Task 2.0, 2.2 and 2.3. All work associated with these tasks will be carried out by PT-GSI. BMBF will supervise this work and will be involved in all strategic planning within NuPNET.

Key people:
- Scientific Officer of BMBF Division Basic Scientific Research (Referat 711)
- Science Program Manager for Hadron and Nuclear Physics at the Project Management Office of the BMBF for Hadron and Nuclear Physics (PT-GSI)

4 Instituto Nazionale di Fisica Nucleare (INFN), Italy

Type of organisation and fields covered

INFN is a public research organisation dedicated to the study of the fundamental constituents of matter. INFN conducts theoretical and experimental research in the fields of subnuclear, Nuclear and astroparticle physics.

Budget: 272 M€ in 2006

Budget for Nuclear Physics related research: Budget of the nuclear physics researches is 13.8 M€ per year as average in the period 2005-2007

Present international co-operation:
- INFN collaborates with other Italian institutions in different fields of scientific research, expecially with CNR and ENEA.
- Most of research mmes are carried out in an international framework. Collaborations are established with CERN (Italy is a member state), CNRS, IN2P3, GSI and DESY Laboratory, DOE, Riken, NSF, NASA.

Main tasks:
- INFN will be in charge of Work Package 3.

key person to be involved:
- Since 2005 The INFN representative has been chairing the INFN Scientific Committee for Nuclear Physics, in charge of the fundings for the experimental research programme in Nuclear Physics.

5 Fundación Española para la Ciencia y la Tecnología (FECYT), Spain

Type of organisation and fields covered:

- The Spanish Foundation for Science and Technology contributes to the integration of scientific research and technological innovation activities, and cohesion between public and private institutions and bodies (government, science, industry, finance, etc). The Foundation operates as a non-profit entity with functional autonomy.
- Its mission is to provide flexible services to the Spanish science-technology-business system.

Budget:
- In 2006 the budget of FECYT amounted to **16 M €**

History and organisation:

- The Spanish Foundation for Science and Technology was created in 2001 at the initiative of the Ministry of Science and Technology and it is registered as a **national foundation** according to the national Law (Ley

General Presupuestaria). The Foundation operates as a non-profit entity with functional autonomy for the purpose of providing ongoing flexible services to the Spanish science-technology-business System and to foster the international projection of Spanish research, in the European science arena in particular. **Even though FECYT is not a funding agency in nuclear physics itself, it constitutes a powerful tool for the Spanish Ministry of Education and Science. FECYT, due to its flexible structure, can provide the Ministry with professional science management teams that otherwise would be difficult to gather**.

Present international co-operation:
- Participation in the European Network of Mobility Centres (ERA-MORE)
- ASPERA, ERA-NET Project
- ERA IB. ERA-NET Project

Curriculum vitae of the key persons to be involved:

Person in charge: The project will be under the responsibility of the Head of the R&D Assistance Service Department of FECYT. With a scientific background and a postgraduate degree in Project management, he has wide experience in both public and private sector, having worked for the Spanish Delegation of the European Space Agency (ESA), the Centro de Desarrollo Tecnológico Industrial (CDTI), and in the aerospace sector in the private sector for different companies.
Contact person: With a PhD in Physics and a postgraduate degree in International Project Management, she has worked both in research and research management positions (CNRS, FECYT). She is technical expert at the R&D Assistance Service Department of FECYT.

6 Ministerio de Educación Y Ciencia (MEC), Spain

Type of organisation and fields covered:
- Spanish government institution in charge of funding basic and applied research. It promotes research in public research organisations and in universities in cooperation with regional governments.
- In charge of the National Fund for Research whose mission is to support basic research in all disciplines and fields through a peer-reviewed competitive grant system

Budget: In 2005 the budget for the National Fund for Research amounted to circa 700 mio. €

History and organisation:
- The Ministry of Education and Science (MEC) is a time-honored institution in charge of managing the central government powers on promotion and funding of research, that, according to the Spanish Constitutions of 1978, are shared with the different autonomous regional governments.
- MEC will be in charge of work package 4.

Budget for Nuclear Physics related research: 2 mio. € in 2005

Present international co-operation:
- participation in CERN, ESA, ESO, and other European institutions such as ESF
- bilateral agreements with different American and European countries
- follow-up of EU programmes
- participation in numerous ERA-net coordination activities

Key persons to be involved:
- Deputy Director General for Research Programmes in the Ministry of Education and Science (Spain).
- Member of the National Programme for Particle Physics; currently is coordinating the Spanish participation in the FAIR project.

7 Fonds de la recherche scientifique (FNRS), Belgium

(Informal translation: Fund for Scientific Research – French-speaking community of Belgium)

Type of organisation and fields covered :

- Public-interest foundation for the support of basic scientific research.
- The founding principle is the promotion of basic scientific research in the French-speaking community, without making any distinction between scientific areas.

Budget :

- More than 108 millions € in 2006.
- Funding by the French-speaking Community, the Federal State and the Walloon Region.
- The FNRS also receives private funds like TELEVIE who provides grants for specific research about Leukaemia.

Budget for nuclear physic related research :
An average amount per year of 4.146.254 € (2002 to 2006) and 4.269.174 € in 2006.

The responsible for the work of the project will be the Secretary general who is the manager of the F.R.S.-FNRS.

8 Fonds voor Wetenschappelijk Onderzoek – Vlaanderen (FWO), Belgium
*informal translation **: Fund for Scientific Research - Flanders***

Type of organisation and fields covered:

- Research council
- Institution of Public Interest for the support of scientific research.
- F.W.O.-Vlaanderen is Flanders' instrument for supporting and stimulating fundamental research and advancing its quality on the basis of academic, inter-university competition.

Budget: **155 mio. €** in 2006

- By the Flemish Community, the Federal Authorities and patronage.

Budget for Nuclear Physics related research: in 2006 **946 k€** (excluding permanent research positions)

9 Institute for Nuclear Research and Nuclear Energy (INRNE), Bulgaria

Type of organisation and fields covered

Bulgarian Academy of Sciences (BAS) is a public research organisation manages the research/innovation programmes in the fields of mathematical, physical, chemical, biological, earth, engineering, humanities, and social sciences. BAS finances and manages more than 70 research Institutes. In the field of nuclear physics the largest research Institute funded by BAS is Institute for Nuclear Research and Nuclear Energy (INRNE)

Budget: of BAS -35 M€ in 2006
Budget of INRNE -2 M€ in 2006

History and organisation:
The Institute for Nuclear Research and Nuclear Energy (INRNE) is the largest one within the Bulgarian Academy of Sciences (BAS). The Institute is founded in 1972 and it is a leading and complex center for research and application of the nuclear science in Bulgaria. The range of activities is wide starting from the physics of elementary particles and atomic nuclei, reactor physics, radioactive wastes problems, dosimetry, radiation and nuclear safety, radiochemistry and radioecology, nuclear instrumentation and nuclear methods for nondestructive analysis, monitoring and management of the environment. INRNE has in its structure several scientific sub-centers as: Nuclear experimental center, Basic environmental observatory etc.

INRNE has 358 employees, including: 4 members of BAS, 20 professors, 71 Assoc. Prof. and 108 other researchers; 108 have PhD and 30 DSc. scientific degrees.

Present international co-operation:
BAS has a bilateral agreement with many European agencies funding research activities.
The goal of BAS is to ensure adequate funding of the research and to support the participation of Bulgarian scientists in the expanding process of international scientific cooperation. INRNE has active scientific connections with many European research centers as: CERN, JINR – Dubna, JRC etc.

Main tasks:
- INRNE will be in charge of Work Package 4.

Curriculum vitae of the key person to be involved:
The Person in charge of the work (attendance the meeting etc) has studied physics and graduated at Sofia University. He has worked 11 years in Laboratory of Theoretical Physics of Joint Institute for Nuclear Research in Dubna (Russia) where he has obtained Ph. D and Doctor of Science degree. The field of research activity is nuclear structure. Since 2001 he is head of Department of Nuclear Physics in INRNE. He is member of several Scientific Councils of BAS and INRNE.

10 Commissariat à l'Energie Atomique (CEA), France

Type of organisation and fields covered
- public research organisation established for research development and innovation in three main fields energy information and health technologies and fundamental research
- under the administrative supervision of French Ministry for research

Budget
- 1 900k€ (CEA annual report 2005).

History and organisation
- founded in 1945
- 10 400 permanent employees
- own research units as well as jointly administered units with the university or with other research organisations located throughout France and some of them abroad
- great diversity of its fields of scientific endeavour
- distinguished co-operation with all other major research actors in France
- fully eligible partner, using the full cost with indirect flat cost (FCF) model
- 2 Scientific Directions : Direction des Sciences de la Matière (DSM) et Direction des Sciences du Vivant (DSV)
- the Department DAPNIA (Departement d'Astrophysique, Physique des Particules, Physique Nucléaire et Instrumentation Associée) is responsible for research in Nuclear Physics. It includes 630 staffs : researchers, engineers, technicians or administrative staff 50 PhD students

Budget for Nuclear Physics related research
- Budget of the Nuclear Physics division is 6.0 mio. € in 2006 (including 4.6 mio. € for salaries)

Main tasks : 3.3,
Key person to be involved
- Since 2001 : head of the Saclay Nuclear Physics Division.

11 Academy of Sciences of the Czech Republic (ASCR), Czech Republic

Nuclear Physics Institute (NPI) of the Academy of Sciences of the Czech Republic is the major Czech institution in the field of nuclear physics. Its mission is scientific research in nuclear physics and related fields and the use of nuclear physics methods in interdisciplinary disciplines. NPI is responsible for coordination of the JINR Dubna activities and related funding in the Czech Republic. It also manages the programme of the Czech cooperation with the European Centre for Theoretical Studies in Nuclear Physics and Related Areas.

12 Helsinki Institute of Physics (HIP), Finland

The Helsinki Institute of Physics (HIP) is a national Finnish Institute for research in physics and physics related technology development. The institute is operated jointly by the Universities of Helsinki and Jyväskylä and the Technical Universities of Helsinki and Lappeenranta.

The Institute has mandate from the Finnish Ministry of Education for coordinating Finnish research at CERN. The Institute is responsible for planning of the Finnish collaboration with the Facility for Antiproton and Ion Research FAIR that will be constructed as an international facility at the GSI Accelerator Laboratory in Darmstadt.

13 General Secretariat for Research and Technology (GSRT), Greece

The General Secretariat for Research and Technology (GSRT) is a department of the Greek Ministry of Development acting as the main funding agency of the Greek State for research. As such, GSRT supervises and funds the operational and personnel costs of the 21 national research and technological centers.
GSRT is responsible for opening calls for national as well as bilateral or international programmes to fund research activities in research centers, universities as well as in industry covering almost all scientific fields. GSRT represents Greece in the corresponding institutions and committees of the European Union and nominates national representatives in international research organisations and agencies. Among the main competencies of GSRT is also the establishment of new research institutes and technological centers in support of sectors of high national priority.
GSRT comprises 7 directorates and 4 departments consisting of approximately 200 employees in different administrative levels. 130 of these employees are scientific officers.

GSRT's annual budget exceeds 350 Mio€. As the supervisor of the National Centre for Scientific Research "Demokritos", where the major national nuclear physics facilities (Accelerator, Reactor, hot labs etc.) are located, GSRT contributes significant funds to Nuclear Physics research in Greece.

14 National Office for Research and Technology - Hungary

In order to enhance the competitiveness of Hungarian economy, the National Office for Research and Technology (NKTH) was founded by the Government in 2004. NKTH is supervised by the Minister of Economy and Transport and is responsible for managing the Research and Technology Innovation Fund, as well as for carrying out the Government's science and technology policy. NKTH is the main funding agency for applied research in Hungary in all areas of science and technology. The strategic pillars of NKTH's strategy are: focusing, commercialisation and exploitation of research results and regional decentralisation. The National Office for Research and Technology's main goal is to enhance the country's competitiveness, to support projects that will result in products marketable on the global market.

At an international level, the National Office for Research and Technology is on the one hand responsible for developing and maintaining bilateral and multilateral science and technology co-operations, and also for encouraging Hungarian participation in the European Union's 7th Framework Programme.

The contact person for NKTH is Istvan Kocsis. NKTH manages the programme, they have already managed several ERANETs for FP6. NKTH wishes to assign Zsolt Fulop as an external expert, and ATOMKI (of which Zsolt Fulop depends) should be a subcontractor when the workshop (T4.4) should be organized.

15 University of Groningen / Rijksuniversiteit Groningen, (RuG/KVI), Netherlands

Type of organisation and fields covered
The University of Groningen (Rijksuniversiteit Groningen; RuG) is a public research and education organisation. It has 9 broad faculties and a number of institutes pursuing research in various fields of science. Among these institutes is the Nuclear Physics Accelerator Institute (Kernfysisch Versneller Instituut; KVI), which is the Dutch National Institute that is dedicated to experimental and theoretical nuclear physics research into the structure of nuclei and hadrons, and the fundamental forces acting between the constituents of matter.
Budget of RuG: 531 M€ in 2005

Budget of KVI: Budget of the nuclear physics research of KVI is roughly 9 M€ in 2005

Present international co-operation:
- KVI is the national institute for nuclear physics research but collaborates with many institutes at the national, European and international levels. Among the institutes with which KVI has strong collaboration links are: GSI, Darmstadt; GANIL, Caen; RCNP, Osaka; RIKEN, Tokyo; NIKHEF, Amsterdam.
- Most of the research programmes, also the ones performed at KVI, are carried out in the framework of international collaborations.

Main tasks:
- KVI will be in charge of Work Package 2.3.

key person to be involved: Prof.dr. M.N. Harakeh

Partners 16 – Narodowe Centrum Badań i Rozwoju (NCBiR), Poland

Type of Organisation:
Narodowe Centrum Badań i Rozwoju (NCBiR) is a Polish government-funded agency. It fulfills its mission mainly by funding and managing strategic scientific research and experimental developmental programs.
Budget:
In 2008 the R&D budget of the NCBiR amounts to ca. 115M €.
History and organisation: Narodowe Centrum Badań i Rozwoju (National Centre for Research and Development) was established in July 2007. The Centre is responsible for specifying research tasks, selecting on a competitive basis between organizations (companies, research institutes, universities) to perform these tasks, supervising their implementation and introduction of their results into practical application. The key assumption is that the outcome of strategic programs, e.g. new technologies or products – shall be implemented and used in economy, health service, administration and other areas crucial for Polish society. The Centre's tasks include also supporting commercialization and other forms of transferring the results of scientific research to the economy; supporting the development of the research staff, including in particular the involvement of young scientists in the implementation of research programs; implementation of international mobility programs for scientists.

Key person to be involved: PhD, NCBiR project coordinator

17 Institutul de Fizica si Inginerie Nucleara Horia Hulubei (IFIN-HH), Romania

The National Institute of Physics and Nuclear Engineering (IFIN-HH) is mandated by Romanian Authority for Scientific Research, the funding agency for scientific research in Romania, to represent it in NuPNET.

IFIN-HH is a public research organisation dedicated to research and development in physical and natural sciences, mainly Nuclear Physics and Nuclear Engineering, and in related areas including Astrophysics and Particle Physics, Field Theory, Mathematical and Computational Physics, Atomic Physics and Life and Environmental Physics..

Budget: 15 M€ in 2006

IFIN-HH represents Romania in international collaborations in Nuclear Physics, Astrophysics and Particle Physics: Joint Institute for Nuclear Research JINR Dubna, CERN Geneva, INFN Italy, IN2P3 France, FAIR – GSI Darmstadt.

In NuPNET IFIN-HH will be in charge of Work Package 1.3.

IFIN-HH is represented by the Director General.

18 Science and Technology Facilities Council (STFC), United Kingdom

Type of Organisation: Publicly funded national agency. Formed by Royal Charter in 2007 (by combining CCLRC and PPARC), the Science and Technology Facilities Council is one of Europe's largest multidisciplinary research organisations supporting scientists and engineers world-wide. The Council operates world-class, large scale research facilities and provides strategic advice to the UK government on their development. It also manages international research projects in support of a broad cross-section of the UK research community. The Council also directs, coordinates and funds research, education and training.
Budget: Annual budget of some 820M Euros.
History of the Organisation: We were formed as a new Research Council on 1 April 2007 through a merger of the Council for the Central Laboratory of the Research Councils (CCLRC) and the Particle Physics and Astronomy Research Council (PPARC) and the transfer of responsibility for Nuclear Physics from the Engineering and Physical Sciences Research Council (EPSRC). The Science and Technology Facilities Council is one of seven national research councils in the UK. All operate under Royal Charters under the direction of the Department for Innovation, Universities and Skills (DIUS). DIUS is responsible for UK science policy and for funding basic research through the research councils.
Key persons to be involved:
Position: Head of Particle Physics Division. Role: Financial planning and control of budgets for Particle Physics, Particle Astrophysics and Nuclear Physics, oversight of peer review, developing policy for new initiatives.
Position: Nuclear Physics Programme Manager. Role: Management, administration and monitoring of the Nuclear Physics programme.

B 2.3 Consortium as a whole

Beneficiaries of the grant are programme owners and programme managers.

The consortium will consist of 18 national agencies from 14 EU member states and thus represent the majority of European nuclear science.

The countries hosting the major infrastructures as well as those having a big part of the scientific community are all present. Both research Infrastructures and scientists are therefore "represented" geographically. The Consortium is also well balanced and complete in terms of diversity: each part of Europe is represented.

In this field, the former projects that have been supported after ad hoc, long, and difficult processes in the past ten years have progressively been finalised in conditions comparable to the current work share of this ERA-NET.

Moreover the instruments of the consortium will be structured to enable new national agencies to join during the duration of the ERA-NET or to become "associates" (T2.3). Another aim of the instrument is to provide a structure where smaller countries which do not have a recognised agency responsible for funding can still have representation and an effective involvement. Relevant documentation from the consortium will be circulated to agencies that do not have formal membership when relevant, to ensure the goal of closer European integration of the science programme (T1.3).

Some ministries are partners in the ERANET (D, ES), which clears indicate their commitment. In the other countries the funding agencies will keep close contact / will keep their ministries informed about the progress of the ERANET. This tends to guarantee the impact to decision makers will be of major importance.

Sub-contracting:

- Depending on the national context, a workshop can be organised through a sub-contract. The Workshop to be organised in T4.4 by NKTH (3000 euros) will be organised by ATOMKI, without changing the responsibility of NKTH in this Task.
- If a funding agency thinks an external expert would be useful to help with some very specific part of the work, the work of this expert could be sub-contracted by the funding agency. This might be very useful in the case of the information exchange (T2.1) where the level of required expertise is essential to the quality of the results, but also in other parts where the Person-months allocated to one funding agency could be used by this organisation to pay an expert providing effort on the task involving the concerned funding agency. In that case, the beneficiary will inform the coordinator who will inform the project officer in the EC Commission.
- The Coordinator will inform the Commission in the case where the expert or the effort for a task is provided by a third party linked to a beneficiary, and may consequently lead to the insertion of the Special Clause 10 if necessary. Such option will be discussed with the Project Officer and among the Consortium in advance.

B 2.4 Resources to be committed

The calculation of the indicative budget is based on the following flat rates (including the 7% of indirect costs allowed for CSA):

WP1 Major items:
- Personal costs for a Manager of the Project; some dedicated effort for Communication task leader;
- The travel contribution is foreseen for the attendance to general meetings of the Consortium (Governing Councils, Kick-off meeting) and, where appropriate, for the Coordination Committee meetings.

WP2 Major Items:
- Personal costs needed for the WP leader and for Task leaders GSRT and RuG

WP3 Major Items:
- Personal costs needed to support to INFN for the lead of WP3, and for NCBIR (T3.2) and CEA (T3.3)

WP4 Major Items:
- Personal costs needed for the support to FECYT in the lead of WP4, and for INRNE and NKTH (Task leaders)

Total Budget per WP (in Euro)

WP1	WP2	WP3	WP4	Total
384 500,00	346 250,00	250 000,00	319 250,00	**1 300 000,00**

Resources from the consortium complementing EC contribution (not included in the budget table):

WP1: No European funds are requested on *personal costs* for the effort made by the whole consortium to participate in the Governing Council Meetings, in some communication actions and the continuous work towards decision makers and stakeholders.
WP4: The minimum manpower (for Funding Agencies that do not lead a task) has been estimated around 0.5 person-months each in this WP. This might depend on the selected project(s) and on the national context of the participating countries in 2010 and can hardly be anticipated. We believe that the needed effort on each country for complementing the joint activity(ies) is likely to be higher.
In the whole Project:
- The indirect costs are limited to 7% for this project
In most participating organisations however the actual indirect costs are much higher
- No funds requested for effort of those Agents outside the Consortium that may have to be contacted and interacted with (notably for Liaison activities T2.3)
- No funds requested for the person-month effort from **Partner 3 (BMBF).**

B3. Impact

Accelerators facilities and associated instrumentations are the Research Infrastructures (RI) of the field. Many modern accelerator facilities are now at the stage where they are too large for university groups and instead are housed in national research centres. Generally these facilities attract an international cohort of user groups. Similarly the detectors are now so complex that their cost and technical demands often require the finance and expertise from several international groups for their construction and operation.

The proposed ERANET will have a **decisive impact on the strategy for existing and new large research infrastructures in EUROPE in the field of Nuclear Physics and related areas**. Being successful this ERANET will have also an impact worldwide due to the international character of the field and the strong competition between the major research infrastructures of the leading regions of the world (Europe, North America and Asia , connection with the OECD Global Science Forum).

At present there is a well organised and coordinated approach to establish through a bottom up approach the scientific goals of European nuclear science. This is provided by the NuPECC Long Range Plans which outline the science goals and the facilities required. At present, however, **the delivery of these goals is weakened by the lack of any coordination on the funding level.** Scientists who wish to collaborate to deliver on the science goals or the facility development have to approach their separate funding bodies and through their separate efforts to generate the combined funding needed to deliver the science. These "ad-hoc" procedures are very time consuming and their efficiency in terms of achieved cooperation schemes are certainly not optimum. **NuPNET will have a major impact by, for the first time, providing the instruments (structure, organisation, common action plan), needed to proceed towards European strategic decisions on the funding of nuclear science and related research infrastructures in Europe.** The funding agencies that form NuPNET will be able to agree on multi-lateral approaches ("*à la carte*") or truly European approaches to specific projects.

As examples of possible common strategic decisions for funding we may think of the new major RI facilities for nuclear physics to be built in Europe, the new international project FAIR in Germany as well as SPIRAL2 in France, which have recently received approval. They could strongly benefit from the NuPNET-ERANET. In the NuPNET governing board representatives of all European Funding agencies and ministries concerned with the construction, operation and instrumentation needed by these new ventures would be able to use tools developed for NuPNET.
As further examples we may think of a financial agreement to consolidate truly European existing RI like the ECT* (European Center for Nuclear Theory) at Trento (Italy). Another important issue could be the decision on and the funding of the AGATA project (Advanced Gamma Tracking Array, a world leading gamma-ray spectrometer), an instrument which will be employed in experimental campaigns at several radioactive and stable beam facilities in Europe such as GANIL (France), GSI (Germany), LNL (Italy) and others.

The knowledge of existing national funding plans and the mapping of these to the scientific goals of the European nuclear physics community will provide a good basis for the further development of planning and coordination of European RI in the field.

The deliverables of NuPNET should not only provide much better coordination of nuclear science and its related research infrastructures in Europe, but should also lead to much better transparency of research funding. They will also certainly lead to a better coordination of R+D effort. This will

enable a much faster and goal-orientated reaction by national funding bodies to new developments in the science and its application in industry, commerce, medicine etc.
NuPNET will maintain close contacts with ERANETs in other disciplines such as astrophysics (Astronet) and astroparticle physics (ASPERA) in order to learn from experiences already made and on the other hand NuPNET will be open to share its own experiences with other communities interested (WP2).
Compared to many other sciences, nuclear physics is already well down the path of moving to a truly European method of operation.

To ensure the decisions of funding continue to reflect the appropriate science directions, NuPNET will maintain a close relationship with NuPECC. The NuPECC Long Range Plans provide a clear and respected opinion for the development of the science in Europe and one of the key aims of NuPNET will be to provide the means of realising these science goals in terms finance and manpower planning for the necessary research infrastructures.
:
NuPNET will also establish contacts with other agencies outside Europe which play a role in the funding of nuclear science, for example NSF and DoE in the USA. NuPNET will also be guided by the report of the Nuclear Physics Working Group of the OECD Global Science Forum which will be released in 2008. WP2, and particularly T2.3 and T2.3 help with taking this aspect into consideration.
Moreover, the improved coordination of activities of Nuclear Physics funding agencies in Europe will also provide a framework for coordinating *related interdisciplinary activities* in fields such as accelerator based **material research**, **nuclear medicine**, etc.

Local or National approaches to **Research infrastrucutres and associated equipments** in the field of Nuclear physics cannot reach the dimension of competitivness due the increasing complexity and overall cost related to such future developments. Bilateral agreements are also not satisfactory; because the intellectual values on multi lateral approach are badly suited to such goals. Global approach for Europe helps overcoming national differences.
Truly European collaborative ventures will have as a first important positive result to prevent launching several RI projects with little complementarities in EU. Core groups with minimum partners for rather large scale projects allow others to join when it becomes possible for them to.

B 3.1 Strategic impact

Expected impacts :	**Expected impacts of NuPNET**
Help the development of a European policy for RI	NuPNET will give a strategic direction towards a European policy for research infrastructures and associated instrumentation in the field of Nuclear Physics. This common strategy will be discussed and tested using the science case developed by NuPECC and the ERANET tools, in particular by achieving a common Funding Plan for joint activities (T3.3). This consortium has the relevant scale to provide a fully European strategy. The partnership of all major Funding Agencies in the field (and the possibility of others to be "associated", T2.4) guarantees that the ERANET will have the biggest impact possible in the field of Nuclear Physics. Contrarily to other fields, Nuclear Physics Research benefits from the Long Range Plan of the scientific community: the major objectives are already commonly agreed upon by the scientists. The Funding Agencies of NuPNET will have therefore of a high chance to succeed in developing a fully European policy for RI that is awaited by the Community.
Address specific needs for international cooperation (critical mass and driving global policies)	Research Infrastructures in Nuclear Physics rely on frontier technologies and there is a strong competition at the world level to attract the science communities. Europe is fortunate to have some major infrastructures in this field. This ERANET will be able through the agreed common Funding Plan for joint activities to enhance European cooperation, reach critical mass to propose very competitive European RI.
Encourage pooling of resources between infrastructure operators at European level to face future challenges	In the past, the development of the European nuclear physics programme has taken place in a rather fragmented approach, since the evolution of European co-operation and the corresponding instruments were not ready. However, as we look forward to the next stage, we cannot deal with the development of the subject in such an ad-hoc fashion. The unique effort made by the scientific community to produce an agreed list of science directions and facility requirements needs to be matched by an **effective procedure for bringing together different national funding systems** to achieve these goals. Within NuPNET, the experience gained, thanks to the joint trans-national activities (T4.3), will stimulate operators to benefit from collaboration at European level. This will serve as the proof that optimising the use of resources is a must when EU wants to push forward its research potential .These joint activities will lead to success stories, since the Funding Plan for joint activities of the

	Funding Agencies shall correspond to the Long Range Plan of the scientific community.
Foster co-operation, spreading good practices, and encouraging infrastructures to develop in complementary ways	In this proposal, two of the work packages (WP1 & WP2) are dedicated to the maximisation of these impacts. In WP1, the cooperation between the funding agencies in charge of research infrastructures will be enhanced by setting up a website to : Organise the appropriate dissemination of the all relevant information for the implementation of existing RI and for their future developments, in particular those selected by the common agreed action plan. In WP2, the main goals are to establish a framework for systematic exchange between ministries and funding agencies on funding modalities and administrative procedures related to present and future RI. It is not an easy task to spread good practices among administrators, as each national system may have its specificities; but through mutual learning and experience sharing, it is a strong belief that the administrators will learn to become regular partners. The result of WP2 should naturally help with reaching a **durable collaboration** between these bodies, as targeted in task 4.4.

B 3.2 Spreading excellence, exploiting results, disseminating knowledge

The Task leader in T1.3 will deliver the Communication Plan in the third month of the Project.
This deliverable will detail:
Dissemination of the achievements of the ERANET:

- Launch of the Website (budget will cove web + database server and the dedicated collaborative software)
- Actions towards national policy makers (TOOLS: events, regular contacts, etc.) and to ensure world wide visibility of our action;
- Dissemination of the (administrative) results of the benchmarking and exchange of information where relevant; of our achievements in prescribing renewed procedures of funding for nuclear physics and infrastructures (Website, events, etc.)

Dissemination and Use of knowledge in future NuPNET funded projects

- Particular attention would be paid in IPR relative questions, or in dissemination, in the possible joint activities, joint calls, or related actions the ERANET could carry on.

In any case, NuPNET will not duplicate the work already done in Outreach or Communication by the Funding Agencies or European Bodies, and shall rather ensure their coordination and the optimisation of such activities at a European level when appropriate.