

FP6-500057-2

Nano2Life**A network for bringing nanotechnologies to life**

Network of Excellence

NMP priority

Publishable Executive Summary

Period covered: **Month 37-48** (February 2006 - January 2007)**Start date of project:** 1st February 2004**Duration:** 48 months**Project coordinator:** Patrick BOISSEAU**Project coordinator organisation:** CEA, France**Date of preparation:** 14 March 2007**Revision:** version 1

1. Project objectives

Initial objectives ¹	State of the Art
To tackle fragmentation	15 out of the 23 partners are actively involved in the Joint Programme of Activity. Most of them are participating more and more whereas the low committed partners are participating less and less
To integrate 23 organisations into 1 European Institute	The drafting of the concept of EIN has been limited by the limited visibility about the calls offered under FP7. A survey among all contact points and WP leaders has clearly showed the feedbacks and expectations of the partners who really look forward a follow up of N2L.
To interface two worlds: Life and Nano	The internal “recruitment” of medical doctors, clinicians and biologist has not been so successful. So the active interface between N2L and other networks in cancer and in vivo imaging have been initiated with great success. In the future, N2L could be considered as a network with a majority of technologists to be interfaced with external end users and then jointly developing projects.
To make Europe an international leader in nanobiotech	No specific task has been initiated to this regards in this reporting period.
To translate science into economic benefits	The participation of companies has been actively continued with a pool of 40 industrial companies participating at different level in the Joint Programme of Activity. An active targeting of companies has been conducted to select them on the basis of the SRPs.
To educate the society about the nanobiotech	Education at summer school, tutorials and research schools are still successful. N2L has been active in many events/exhibition as well as in the media with a long list of published articles.

2. Contractors

The three sub groups of partners already identified during the previous years between the very committed partners, the less committed ones and the sleeping ones are more or less stabilised. 10 partners are allocated with more than 5 PM over the last year, then 6 partners getting between 1 to 5 PM and then 7 partners with a (very) limited work force allocated to the Joint Programme of Activity. This is clearly visible in the implementation of activities under the ten work packages and is clearly visible in the budget covering the period from month 37 to 48. With 23 founding partners, Nano2Life is a large network which shows the limit of real integration on a large scale. Sharing the same vision, the same objectives, allocating relevant resources to this kind of collective actions cannot be envisaged in a large group of partners.

In that sense, Nano2life is a real laboratory where integration is experimented on a daily basis. This experiment should benefit for the design of future projects under FP7, especially for the follow up of N2L.

¹ As listed on pages 5 and 6 of Annex 1 of the EC contract

3. Work achieved

Nano2Life is in operation for three years now and as such, most of its activities have reached a significant level of maturity. After two years, all activities are now fully deployed and we have now a good return of experience which enables us to draft the potential follow up of N2L.

Mobility is now widely publicised and used by our scientists, especially the young ones. The data bases on equipment and expertise are not used as initially intended and will be reshaped under the next months, in a format which can be exported even beyond N2L life time. Nearly half of the partners are now using the mobility scheme, with a total of 19 grants allocated. One fourth of the partners are applying several time.

The offer on **education** is now stabilised with one annual N2L specific summer school in Greece, two annual research schools and the tutorials at each annual or summer large meeting of the network. 47 fellows have been funded to attend the schools. Video streaming of all plenary session and tutorials enable N2L to offer a highly advanced video platform for distant learning.

The **joint research programme** entered a new phase in year 3 with the full deployment of the SRPs, in a period with nearly no funding opportunities in Europe. The success of the SRPs has been unequal, depending of the leaders, the topics, and the management. After 16 months, two SRPs have been stopped while a new one has been initiated. Some SRPs have initiated some long term projects, most of them at the interface between several SRPs. In parallel, N2L expertise has been invested in the topical working groups of the new ETP nanomedicine which recommended research priorities in nanomedicine for FP7. The large meetings in March (annual meeting) and September (summer meeting) are still a great success, with a growing ratio of young scientists, becoming the “next N2L generation”.

After several years of investment in preliminary steps, namely state of the art report, 4 prospective workshops, and 1 application workshop, the first draft technological roadmaps have been edited last summer which highlights the potential contribution of nanobiotech to some specific application like in vitro diagnostics, or environment monitoring. The EoN² holds two sessions per year with an increasing interest from N2L experts. Their excellent summary reports is made available for free for N2L members and charged for external members. This complete set of **foresight activities** makes N2L a really different network in nanobiotech, and therefore attracts some highly interested companies.

Besides their **participation of targeted companies** to the foresight workshops, potential industrial associate partners have been approached in fairs and exhibitions, sometime using the catalogue of technological offers/requests designed for this purpose. Selected SMEs have been recruited on some SRP's requests. The associated companies are highlighted and promoted one by one on the N2L website as “company of the month”.

Bridging the gap between ethicists and technologists has been the main objective of the N2L **ELSA**³ board; this has been achieved by educating the scientists with live session at meetings and several publication incl. EMBO Journal and a book! Face to face discussion with project leaders on some hot topics will be encouraged and further developed during the last year. The N2L ELSA board serves also as a back bone for the ELSA working group of the ETP⁴ Nanomedicine.

Educating our members on **IPR** issues is achieved by publishing 6 guidelines on IPR related issues as well as by organising dedicated sessions at annual meetings. Re **knowledge**

² European Observatory on Nanobiotechnology

³ Ethical, Legal and Social Aspects

⁴ European Technology Platform

management, an internet platform has been designed to offer a quick access to all information related to our SRPs⁵. Meanwhile an exploitation workshop sponsored by the EC helped the WP leaders to better realise the kind of exploitation N2L can envisage, further to its life time.

The **management of human resources** within N2L, even if it's not a legal body, is progressing well with the continuation of our PROGRESS course on leadership and by starting a highly innovative e-mentoring programme which associates currently 16 couples of mentor/mentees. Education on gender is continuing with dedicated sessions at the large meetings.

Internal and external communication has been significantly reshaped with a unique central point for collecting and disseminating information, using various channels according to the targets: a new internet web site and a new intranet web site have been designed, a electronic newsletter is now send every two months, with sometimes email alert with breaking news. Communication material has been designed for the N2L spokesperson in exhibition or scientific meetings. We still continue the tests and development of internet tools for video streaming and for simultaneous communication among the WP leaders. No optimal solution has been found so far for remote synchronic communication.

Re the overall **management** of the project, the main difficulties consisted in keeping the momentum in a period with no possible funding for research, a very late payment of the EC grant and a change of generation among our participants, from the "pioneers" to the "young scientists". However, we still can rely on approximately 15 committed partners, while the others are showing up occasionally.

4. Perspective

The last 12 months will focus on the initiation of new R&D projects with the perspective of applying to new funding sources under FP7. Meanwhile, all other activities like education in all fields, mobility, and industrial cooperation will continue along the same lines as previously designed.

N2L has reached its maturity and has **gained sufficient experience on most activities to envisage its follow up under FP7** in better conditions. Unfortunately, there are no calls at the moment under FP7 which could be easily targeted to continue shaping and strengthening the European nanobiotech community build on this experience. Therefore, no feasible and obvious solution seems available today to continue our efforts. Offering an effective solution to this request is a main target of the network for the next weeks and months, to prevent a disastrous loss of investment.

More info: www.nano2life.org

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⁵ Strategic Research Programmes