



## **NESSI comments on ERA Green Paper**

### **Final Version**

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## **1 Introduction and general comments**

Launched in September 2005 by 13 partners and enlarged by September 2007 to 22 partners and over 300 members, NESSI (Networked European Software and Services Initiative) addresses the major changes that are driving the IT services marketplace.

NESSI aims to provide a unified view for European research in Services Architectures and Software Infrastructures that will define technologies, strategies and deployment policies fostering new, open, industrial solutions and societal applications that enhance the safety, security and well-being of citizens.

NESSI welcomes the invitation of the European Commission to comment on the next steps to be taken in order to make the European Research Area a reality. Given the broad NESSI membership we seek to make a number of particular remarks rather than using the questionnaire provided in the public consultation.

The endorsement of the European Research Area (ERA) concept by the Lisbon European Council in 2000 followed by the target set by the Barcelona European Council in 2002 for raising R&D expenditure to 3 % of GDP was a critical step to ensure a stronger focus on research and innovation. While negotiating the overall EU budget it should always be kept in mind that investment in research and innovation is an investment in Europe's future, ensuring the standard of living and well being of Europe's citizens.

In this context NESSI also welcomes that EU cohesion policy and its financial instruments - the Structural Funds - are now supposed to give strong priority to the development of research and innovation capacities, particularly in less developed regions. These initiatives are indeed valuable steps on which further progress can be built to ensure that research and innovation as necessary ingredients for Europe's competitiveness in a global economy receive the focus and also budget they deserve.

As a final general remark we would like to state that a stronger focus on industry research in the ERA paper would have been welcomed. Although more than half of all R&D in Europe is performed by the business sector the ERA Green Paper focuses almost entirely on academic research.

## **2 Optimising research programmes and priorities**

### ***Supporting the coordinating role of European Technology Platforms (ETPs)***

European technology platforms are major large-scale research initiatives in key technology areas. Platforms bring together companies, research institutions, the financial world and regulatory authorities to define a common Strategic Research Agenda on a specific field. The ETPs thus can play a valuable role in structuring the European Research Area, and more specifically in playing a coordinating role to ensure that outputs of many research areas and projects are given the opportunity to interoperate towards a common strategic result.

In this context, NESSI, the Software and Services ETP, defined a structure that classifies research projects from strategic to compliant. During Q4 2007, it will define more precisely contribution mechanisms, and in this way provide an operative approach to coordinating research results from a delivery point of view. The classification of research projects is based on how their results contribute to NEXOF, the NESSI Open Service framework, the major delivery around which NESSI partners and members are uniting their efforts.

This classification is also at the basis of the openness of NESSI, allowing for any research project operating in diverse environments, whether funded through national or European programmes or unfunded or fully operating in an industrial environment,

whether involving NESSI partners and members or stakeholders totally outside of any NESSI community, to propose its output towards the realisation of NEXOF.

However, we feel that while ETPs have analysed how to fully implement and best exploit the value of the technology platform instrument in terms of coordination, this element, widely identified as one of the key mission for the ETPs from the start, still needs clearer recognition and support at both the Member States and Commission level to speed up relevant achievements and assure wider impact. This is especially critical for the research programme of the European Commission, for which we would like to stress that the added value of ETPs, in terms of their contribution towards strategic, coordinated results enabling to increase competitiveness and wellness of the European economy and society, is not yet fully reflected by the procedures currently used for allocating the financial resources for research implementation.

### **Research infrastructure – Focus on Services and Software**

Traditionally considered as a heterogeneous ‘left-over’ collection of activities that are not included in the agriculture or industry sectors, the services/software sector was, until recently, a neglected area of research and economic policy making.

However the services sector in the European Union (EU) is growing considerably and now accounts for over 70% of total EU economic value added. Over 70% of EU employment is in the services sector and this figure is set to rise in the coming years<sup>1</sup>. Services have been the source of most job growth over the last decade.

Services and software are essential for the efficient operation of an economy, facilitating commercial transactions and enabling the production and delivery of goods and other services. As companies learn to trade products and services in new ways, often through ICT, services have become a pillar of the European economy. A country with an open, dynamic and efficient service and software sector enjoys a competitive advantage in the production of both goods and services, as compared to countries with less developed service sectors.

Despite so much of Europe being dependent on services, prior to the 7<sup>th</sup> Framework Programme, services had received little attention in terms of policy-making and research programs.

Government innovation policies, R&D budgets and programs have historically focused on hard sciences and manufacturing. This needs to be rebalanced given the fact that services are the source of most jobs and economic activity. How these programs are

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<sup>1</sup> OECD, growth in Services, p.1.

designed is important, because the innovation process in services can differ from that in manufacturing.

The increasing importance of software and services was made clear in the 7<sup>th</sup> Framework Programme where for the first time services were put at the centre of the 1<sup>st</sup> Challenge in ICT. However, in addition to continuing fundamental research in science, technology, engineering and mathematics, there is also an increasing need for **multidisciplinary research into the role of services** and software and how to improve them.

### **3 Realising a single labour market for researchers**

#### ***Researchers' mobility***

NESSI welcomes that the European Commission acknowledges the high importance of facilitating the mobility of researchers across Europe and the need to increase incentives for researchers from third countries to take up research posts within the EU.

NESSI seeks to highlight one aspect that merits particular attention with regard to improving the mobility of researchers. First, more information is necessary to understand what the obstacles of mobility are. Initiatives such as the simplification of visas by introducing fast-track procedures and the portability of pension funds are most certainly going into the right direction, but more studies should be initiated in order to be able to take the adequate measures.

Additionally, there is a need for funding schemes allowing short mutual visits to facilitate a more flexible type of mobility. Such schemes could also be applied to foster a greater willingness of exchange between industrial and university research. Very important is also the opportunity to take funds from one institution to another – irrespective of the researcher's position.

Third, researchers often know too little about the research conducted in other countries apart from those countries that are already open to researchers from abroad and that publicise their research results in English. This is true for EU projects as well as for other research. All these issues could be addressed by EU measures, creating incentives for a change at the member state level.

#### ***Charter for Researchers and Code of Conduct for their Recruitment***

Although we appreciate all efforts to improve mobility for researchers we have some concerns regarding the implementation of the Charter for Researchers and the Code of

Conduct for their Recruitment<sup>2</sup>. Although we certainly support the basic principles of the Charter, a full implementation of every element is simply not possible in industrial research labs. However, according to the definitions, Charter and Code apply not only to basic research and strategic research but also to all professionals in applied research, experimental development, innovation and a wide range of support functions related to R&D. Whereas the Charter and Code may be suited for academic researchers and partly also to industrial researchers in Corporate labs, they are certainly not workable for developers in the product divisions of large firms and even less for innovators in SMEs. For example, in view of Europe's efforts towards "better regulation" we cannot imagine that innovating SMEs would have to publish their vacancies on the European Researcher's Mobility portal and that they should use selection committees with the composition prescribed by the Code. Furthermore, checking compliance would cause major red tape. Therefore, the Charter and Code should not be made mandatory, as the Green Paper now seems to suggest, at least not for industry. Also, adherence should not be made a prerequisite for participation and funding in governmental programmes to support R&D.

## **4 Developing world-class research infrastructures**

### ***Participation of industry***

The Research Infrastructures parts of the successive Framework Programmes have traditionally been almost entirely dedicated to the use as or by public research infrastructures. The challenge today is to increase the Industry's participation, either as a supplier of private research infrastructures in an Open Innovation setting, or as a user of public research infrastructures, by facilitating their access to existing infrastructure or by facilitating the setting-up of new ones. Such measures would benefit to both basic research as well as industrial research.

ICT ETPs, having the goal of developing innovative services and products, need new Research Infrastructures- as well as interconnected test bed facilities- dedicated to the ICT & Software and Services. Industry, research organisation, which will be strengthened by such initiative, can be the core of interconnected test beds.

## **5 Strengthening research institutions**

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<sup>2</sup> See [http://ec.europa.eu/eracareers/pdf/am509774CEE\\_EN\\_E4.pdf](http://ec.europa.eu/eracareers/pdf/am509774CEE_EN_E4.pdf)

## ***European Institute of Technology (EIT)***

Europe has many good research centres, but few of them are in the top five of their category in the world. Thus it is crucial to strengthen and empower those that exist.

A key factor behind the success of the top US universities is competition - they compete among themselves for the best faculty, for the best students, and for government and industry funding. Healthy competition is absolutely key to such excellence.

NESSI would like to receive further details on how the EIT will actually deliver the required consolidation and critical mass required to energize economically relevant research.

The main gap in the EU's ability to cope with the global challenge is the weak link between science and society, including the economy. The weakness lies in the EU's lacking capacity to transform science into commercial results. Hence NESSI believes the EIT should contribute mostly in this area.

After achieving its' general mission to drive excellence and provide for a competitive and entrepreneurial spirit the EIT would be an ideal place to bring together all stakeholders and related constituencies to create a new discipline focusing on Service Science. Service science should bring together ongoing work in computer science, operations research, industrial engineering, business strategy, management sciences, social and cognitive sciences, and legal sciences to develop the skills required in the services-led economy of the 21st Century.

NESSI believes the EIT should organise its activities around interdisciplinary issues moving away from traditional style of organisation around "silo" approaches. EIT allocation of funds should be based on excellence only. To ensure this the EIT should adopt an innovative governance structure with a large degree of autonomy. In particular, the EIT should set its own scientific agenda, avoiding any sort of political pressure. The European Commission should resist the temptation to appease different lobby groups, which are insisting that the EIT should solely rely on existing European structures without changing them. It will be insufficient to merely increase Europe's research funding or to build a networked constellation of (selected) existing institutions.

As a consequence, the EIT should have a structure able to exploit local value. Europe is large and diverse, and the structure should be adapted to that. We do have existing infrastructures, but not enough mobility, competition and exchange of best practice between these. Countries and individual universities should be empowered and encouraged to shape up their programs to strive for excellence and innovation in Europe.