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A RENEWED EUROPEAN RESEARCH AREA

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SPEAKING NOTES FOR JAN-ERIC SUNDGREN

- Research and innovation policies can no longer be disconnected. Their design and implementation should be developed in strong interaction, together with education policies. The goal of addressing major societal changes should lead to better integration and coherence between research, innovation and education policies. It is also time to adopt a value-chain approach, which encompasses all the process stages from R&D to customer service.

- Changes needed to policies in support of innovation have **5 direct consequences** or implications for research policy:

1. Strengthening EU research policy

An ambitious innovation strategy calls for a major overhaul of the EU budget to better reflect the EU's objectives. BUSINESSEUROPE calls for a budget increase for R&D and innovation, which should be achieved by shifting money from other areas of the EU budget (e.g. agriculture) to research and innovation without exceeding the overall 1% budget quota of the EU.

A future R&D Framework Programme should have double or triple the volume of FP7. The CIP should also double or triple in volume and the EIT, increase in a minimum € 500 million per annum.

Europe should also make greater use of the Structural Funds for boosting R&D and innovation, for example by means of public procurement.

2. Implementing more efficient management models

An increase in the amount of EU money cannot be a sufficient condition to boost R&D and innovation. Resources must also be managed in a more efficient way so that their use is optimised. The managerial model of public support policies must also be improved. This calls for:

- Defining a more effective governance model for the European Research Area (ERA), with a view to fully exploiting the synergies that can be developed between national programmes, EU programmes and the programmes of other specialised European agencies.

Under that background, CREST (Comité de la recherche scientifique et technique) could have an important role to play. While the legislative work should be left to the Council Research Working Party, the strategic dimension of future CREST should be emphasised. With a more output-oriented agenda setting, CREST could be used by the Commission as a sounding board for early discussions on its policy initiatives. The planning of CREST work would benefit from taking a long term perspective, up to 2020,



so as to reflect the lifecycle of Community policies and instruments (FP and other ERA instruments).

- Making EU instruments more efficient, in particular public-private partnerships such as Joint Technology Initiatives (JTIs).
- Implementing a more risk-tolerant and trust-based approach in EU programmes.

3. Developing public-private partnerships and encouraging industry to participate in EU R&D programmes

The European Commission must boost the attractiveness of the R&D Framework Programme (FP) and the Competitiveness and Innovation Framework Programme (CIP), in particular for SMEs.

- To achieve these goals, reducing red tape, simplifying rules and procedures for participation and management and introducing some flexibility through more adequate and lean instruments are crucial. This has been developed in bullet points 4 and 5 as a response to question 5.

- Use should be made of the forthcoming revision of the Financial Regulation and create a partial exemption for research and innovation, to account for a certain degree of risk that is inherent to these activities. A risk-tolerant and trust-based approach in research funding must now be implemented.

Furthermore, the Financial Regulation should also be adapted to allow setting up JTIs and similar structures without having the status of Community body, even if the Community is contributing to the budget.

4. Adding a business vision for the European Research Area (ERA)

Changes needed to policies in support of innovation imply that the ERA develops effectively as an efficient internal market for knowledge, researchers and technology on the one hand, and that knowledge exchange within it is improved, on the other hand.

- The broadest possible access to the state of the art knowledge needs to be provided to researchers, be they in the public or the private domains. For smaller and younger companies in particular, it is a major challenge to find out what is going on and what could be beneficial to the further development of their activities. It can also be difficult for them to learn of opportunities to capitalise on what they know. The development of powerful and adequate literature search tools and integration of such strategies using these tools as part of the education curriculum of researchers is a necessity.

- Sharing knowledge is at the heart of open innovation, and should be encouraged. Knowledge that is generated through public investment should be available in ways that will maximise the benefit for the community that paid for it. Open access to publications from public research organisations and open-access databases have a part to play in this process. But general principles aimed at making everything open, in the sense of “free of cost” or “free from protection”, will be counterproductive. Often, protection of intellectual property and dissemination of other research results will be more effective because proper care has been taken to preserve the potential value of the knowledge.

- Furthermore, implementing “open access” policies for publications from public research organisations should in no way affect provisions on intellectual property protection, dissemination and confidentiality in collaborative R&D projects involving



public research organisations and companies, even if receiving public co-funding. After all, companies are also investing with their own money in such collaborative projects, so those companies are entitled to benefit from the results of such collaborations, not only society at large.

5. Better aligning policies in the “knowledge triangle” (education, innovation, research)

- The ERA should be more strongly linked to the other dimensions of the “knowledge triangle” which will have implications for its governance. At national level, different arrangements exist including the combination of responsibilities in a single Ministry and the establishment of inter-ministerial groups. ERA and its institutions cannot take responsibility for all education and innovation policies in addition to research.

However, issues involving complementarities and synergies between the three dimensions of the “knowledge triangle” must be taken into account in ERA governance and the interactions between the different areas should be strengthened. Better interaction could be achieved by holding joint group meetings and even ministerial meetings. A complementary option could be to set up time-limited networks of representatives from the different policy areas concerned to explore specific cross-cutting issues.

- The European Institute of Innovation and Technology (EIT) can play a very instrumental role in achieving synergy between research, education and innovation activities and policies in the Knowledge Triangle.

- There is also a need to extend the coordination of policies at European level to other policy domains, for example to regional policy (Structural Funds). Several ERA issues, for example mobility of researchers, involve more general aspects of the Community acquis and could not be tackled solely by the ministries engaged with the ERA policies.

- Jointly addressing societal challenges can help focusing the various public and private actions and policies towards common goals.

Innovation is a key element for addressing the major challenges facing society today, particularly those linked to climate change, ageing population and energy security. These challenges provide also potentially important business opportunities and areas. EU innovation policies should therefore have a stronger orientation towards addressing major societal challenges.

- BUSINESSEUROPE supports a challenge-based approach to research, development and innovation.

The selection of grand challenges should be subject to a broad political debate at the European level and should call for a consultative process, involving all stakeholders. These challenges should be identified through a wide process that should encompass all major policy fields. Correspondingly adequate instruments for each of the identified grand challenges should be developed.

- We believe that focus should be placed on economic challenges. This is a pre-condition to the other society challenges and a key condition for Europe’s competitiveness. Europe also needs to secure production facilities in Europe in the



future. If not, there is a risk that research capacity will be transferred to other parts of the world following the transfer of production.

Non-technological innovation is also important. A combination of technological and non-technological aspects is key to successful innovations. In the past the focus was laid on technological innovations. Therefore, non-technological research and innovation should to a larger extent be included in existing funding programmes.

BUSINESSEUROPE's Research and Technological Innovation Working Group suggests the following **eight societal challenges**:

1. Staying competitive

Manufacturing companies are very important for the creation of jobs in Europe. We need to develop the competitive edge for the companies in order to face the challenge of global competition. A sustainable industry in Europe has to be sustaining in terms of energy and resource efficiency as well as with regards to the competence of its employees. Technology development has to be placed into such a context if we want to achieve the goal of really making a contribution to the European society. This requires investment in research and innovation within this area as well as rethinking strategies and mechanisms on how to operate, evaluate and use the research results.

2. High-quality and affordable healthcare, in relation with an ageing European population

Europe does still have some comparative advantages in life sciences. This should be strengthened. Translational research will become ever more important to interlink basic with clinical research.

3. Supply of resources

A foremost challenge is the one raised by the oil crisis. Whether we have reached the oil peak or not, there is no doubt that we have to find innovative ways of saving energy and develop alternative energy sources. But it is not only energy. We might run short on some raw materials like metals and minerals. Water is also a major issue. Wood is also an issue. Research can bring the solutions to save resources, to find alternative ways of producing and of waste reduction so that we can achieve a sustainable economy.

Europe is good at green technologies, which are a very important contribution to solve the problematic consequences of climate change, but it takes even more research efforts, innovation and dissemination of these technologies. Industries need environmental-friendly resources, and research in the best applications of raw materials or energy savings need to be developed.

4. Mobility

New vehicle concepts and technologies are needed. Transportation systems have to be modernised and adapted to the needs of today, and of the future, mainly adapting to an ageing population and concentration of population in urban areas.

5. Knowledge society

Education and learning are the fundamentals of modern society. Innovation is the central driver and competitive factor. Research in this area is needed both sociologically (how to cope with ever more information, how to have all citizens participate in the knowledge society) and technologically (data banks, strengthening of Europe's scientific and technological base).



6. Convergence of technologies

Today's society is only at the beginning of realising what cross-disciplinary combinations of biotechnology, ICT, nanotechnology or neuro-sciences could bring to improve the quality of life. The USA has taken a head start on this theme. It is important that European research focuses on it. Convergent technologies can give impulses to manifold areas of application: medicine, energy, materials sciences are just some of these. As always, ethical aspects have to be considered and discussed very seriously.

7. Security

All of the challenges described above also cause fears. There are also some risks emerging which are rather new: epidemics, terrorism and weapons of mass destruction, etc. The Internet also raises security risks. These risks have to be addressed adequately.

8. Urbanisation

In 2008, more people in the world were living in cities than in the country. Megacities are growing especially in the emerging economies. These developments ask not only for adaption of infrastructure but also for new forms of living and participating. Cities have their own eco-systems with their very special problems. Governing cities and providing their citizens with affordable and qualitative public services is a special challenge for politicians where innovative approaches are needed.

