

**Future European research cooperation  
- position paper by the Danish Government**

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## **Position paper**

### **by the Danish Government on future European research cooperation**

#### **1 Introduction**

Research and development play a key role in the implementation of the Lisbon Strategy aimed at Europe becoming the most competitive and dynamic knowledge-based economy in the world by 2010.

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In 2000 the Commission launched the vision of a European Research Area, which has become a frame for a higher degree of coordination between national activities and joint efforts to improve the exploitation of joint European resources for research.

For more than ten years, the Framework Programmes have encouraged closer European cooperation on research projects of common interest. The project co-operation has strengthened a European tradition for cooperation in the form of research consortia involving participants from several European countries.

With the Sixth Framework Programme we have initiated a process that promotes cooperation on solving major European research challenges and steps up the development of structures that will give European cooperation greater impact in the future.

The continued process should be based on the intentions of a revised Lisbon Strategy and further development of the European Research Area in the form of a genuine internal market for generation and exploitation of knowledge.

#### **2 The long-term objective**

The Lisbon Strategy should be strengthened if Europe pursues the objective of an internal market for knowledge more systematically in the future. The concept entails the creation of a frame that will optimise the joint European effort in research, innovation and education.

The creation of an internal market for knowledge will strengthen Europe's knowledge position globally and generate benefits from an intensive exchange of knowledge between countries and regions in the Union. This will enable Europe to compete efficiently with the major players in the field of research and technology outside Europe.

An internal market for knowledge should be based on four key dimensions for generating and exploiting knowledge:

- Human resources
- Facilities and infrastructures
- Capital and investments
- Exploitation of results and technology transfer

Denmark attaches great importance to organising the coming Framework Programme in a manner that will ensure a balanced support of European development in all four areas.

Denmark places emphasis on supporting the development of generic technologies through EU activities in the field of research training and infrastructures that specifically contribute to ensuring the availability of the necessary number of qualified researchers and access to advanced infrastructures.

### **3 Joint resources**

At the 2002 Barcelona-summit, the European Council agreed on the target that total investment in research and development should approach 3% of GDP by 2010. Today, European competitiveness diminishes compared to the US and other regions where growth rate for investments in research and development is at a considerably higher level than in Europe.

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Apart from national efforts to increase investments in research and innovation, a significant increase in investments in research and innovation at EU level is also needed.

Consequently, Denmark proposes to double EU's current annual budget of EUR 5 billion for research and development already from the beginning of the 7<sup>th</sup> Framework Programme in 2007.

It is emphasized that the EU budget increase should primarily be spent on developing European cooperation in basic research, as EUR 2 billion should be budgeted annually for this purpose. Furthermore, the increased funds of the EU budget should ensure substantial investment in the development of new generic technologies such as biotechnology, nanotechnology and information and communication technologies; all of these technologies show promising potential for application within, for example, food, health, energy and environment.

### **4 Structure of the Framework Programme**

The Framework Programme must be organised so that it is clear and easy to understand for all potential applicants and other interested parties. Therefore, Denmark suggests a structure where the Framework Programme becomes accessible through one of the four main fields:

1. Basic research
2. Thematic programmes in support of technological development
3. Research to support policy
4. Nuclear research activities

These research activities should be permeated by a number of horizontal initiatives, including

- Research training/research careers/mobility
- Development of research infrastructures
- Exploitation of research results and technology transfer

It should be considered whether the new activities: security research and space research should be separate activities or integrated parts of research to support policy.

## **5 Basic research**

In Denmark's opinion, it is of utmost importance that the decision to establish a European Research Council is made in connection with the Seventh Framework Programme. The European Research Council should support European basic research of the highest quality. A substantial amount in the vicinity of EUR 2 billion per year should be set aside for this purpose.

A European Research Council consisting of highly esteemed researchers should be formed as an independent organisation, accountable to the Commission solely for the funds allocated to European basic research. The administration of funds should be as simple, flexible, efficient and transparent as possible. Projects should be selected for funding exclusively on the basis of scientific quality.

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The European Research Council should have a board of 10-15 members, all of which must be highly qualified and respected researchers. The number of members should be limited in order to ensure that work can be carried out efficiently. The board must be free of special interests politically as well as financially.

Guidelines on how to evaluate the submitted applications have to be drawn up. The main criteria of the evaluation must be scientific quality and originality; and projects should be evaluated by highly qualified and independent researchers. Decisions and procedures should be characterised by transparency and openness. All this to ensure that European researchers would have confidence in the Council.

## **6 Themes**

Denmark finds it important that the Framework Programme includes substantial efforts in the fields of biotechnology, nanotechnology, and information and communication technology. These three fields, which are also essential to the Danish Government's plans for developing the high tech society in Denmark, show great potential for application in core areas such as food and health, environment and energy. Furthermore, environmental technologies should be included as an important element based on the Commission's Environmental Technologies Action Plan.

In connection with the prioritisation of themes it is important to balance two considerations: on the one hand it is important to consider the research activities under the Sixth Framework Programme and to ensure the necessary continuity in the Seventh Framework Programme. On the other hand it is also important that the Seventh Framework Programme reflects the new challenges to be faced by the EU.

## **7 Research to support policy**

We must ensure that legislation and regulation in the EU is adopted and implemented on the basis of relevant scientific facts.

It is important that research tasks are defined in close cooperation with the respective directorates general (environment, agriculture, etc.), and the players and experts in Member States.

Denmark attaches great importance to research to support policies within areas such as food, health, energy, environment, and information and communication technology. Denmark proposes that research activities to support policy are continued on approximately the same scale as in the Sixth Framework Programme.

## **8 Nuclear research activities**

It is Denmark's opinion that the total budget for nuclear research should be maintained at its present level.

Regarding the construction of the ITER facility and support activities, Council has already sanctioned an upper limit for the Community budget contributions at 40 per cent of the ITER construction costs. Denmark has requested a comprehensive estimate of the total financial consequences of constructing ITER, including the total expenditure on fusion research on the EU budget and the expenditure related to the establishment and operation of ITER. It is important to arrive at a more comprehensive overview of the entire ITER budget.

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## **9 Human resources**

Denmark warmly supports the idea of making Europe more attractive to the best researchers and we agree on the need to strengthen the recruitment of researchers, research training, and the researchers' mobility and career opportunities.

One of the prerequisites for European growth is the training of researchers. Consequently, Member States must increase their appropriations towards this end, just as more resources have to be allocated for training and mobility purposes in the Seventh Framework Programme. This is particularly the case within the aforementioned generic technologies. Without qualified human resources it will not be possible to develop and exploit these new technologies to a satisfactory extent in European companies.

Considering how difficult it has been in the Sixth Framework Programme even for excellent projects to obtain support from the Marie Curie Actions, the future organisation of research training and researcher mobility initiatives must be seriously contemplated.

It is the Danish view that these activities to a much wider extent should permeate all activities in the Seventh Framework Programme, also within priority themes, and regardless of their implementation as traditional projects, integrated projects or networks of excellence. The advantage of this approach, among others, is that grants will be attached to networks and researchers whose quality has already been recognized.

At the same time, Marie Curie Fellowships independent of the thematic priorities should remain available.

## **10 Innovation and better exploitation of results by enterprises**

Improving Europe's competitiveness requires that we become better at turning new knowledge and new research results into new products and production processes for the benefit of corporate competitiveness and society as a whole.

In Denmark's opinion it is crucial that the research programmes be organised in a manner that enables the enterprises to play a central role in developing the widely applicable technologies that are vital to future European competitiveness. Furthermore, the European research programmes must be organised so that small and medium-sized enterprises in many lines of business and fields of production will be able to draw on the most recent knowledge in the European knowledge base.

It is therefore necessary to think imaginatively at EU level when it comes to developing new ways of disseminating knowledge to companies, including small and medium-sized enterprises.

Denmark supports the Commission's idea of establishing a number of technological platforms in fields where cooperation between many different parties is a prerequisite for carrying through major European technological development. It is emphasized that the decision-making process should involve the countries and relevant enterprises in the considerations on the organisation of the work related to each platform.

The EU Framework Programme must be organised in a manner that encourages small and medium-sized enterprises to participate. This applies to instruments, subjects and administrative procedures alike. It is a fact that many enterprises have found it exceedingly difficult to find their place in the new instruments: Integrated Projects and Networks of Excellence. Partly, these instruments must be adjusted somewhat compared to their present form, and partly there has to be a suitable number of alternative forms of participation e.g. flexible projects with fewer participants and special means and activities aimed at SMEs.

## **11 Research infrastructures**

Denmark agrees that there is a need for strengthened European efforts to ensure the establishment of new advanced and costly research infrastructures because access to such facilities is crucial to basic research, technological development and research training at the highest level. Research infrastructures should be prioritised not only for technical and natural science research but also for social science research and the humanities. Denmark will support the development of better and more efficient European frameworks for organizing decision-making processes and cooperation.

Denmark finds that the preliminary work in ESFRI has led to a useful clarification of the overall problematics of investments in infrastructures. The work has resulted in a sound knowledge base, which will be available in the foreseeable future, with a roadmap providing overview of the need for new investments in years to come.

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We hope that, eventually, this work will lead to the presentation of a prioritised list of proposals for new investments that may be used in the decision-making process at European level.

## **12 Security research**

In accordance with the high priority that the Government has given the battle against terrorism, Denmark supports that funds are allocated to security research in the Seventh Framework Programme.

The programme should support research aimed at increasing the public's security against terrorist attacks and improving Member States' ability to handle crisis management situations. It covers research into e.g. bio-terrorism (detection), gathering of intelligence, reconnaissance and surveillance, and analyses of the causes of conflicts. The programme will include development of knowledge and technologies that may be exploited for both civilian and military purposes – "dual use". It is, however, expected that research into development of defence equipment will be conducted under the auspices of the European Defence Agency.

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## **13 Space research**

The constitutional treaty contains rules stating that space activities are to be carried out as part of the EU cooperation. This aspect should be considered against the background of the framework agreement on space cooperation between the EU and ESA of May 2004.

Further deliberations should include a more specific analysis of the possibility to exploit the potential of space technology in developing new EU policies where space activities may contribute to solving important problems. It must be ensured that the development of satellite based solutions in relation to sustainable development, security and communication technology is organised in a manner achieving administratively and economically viable solutions where user fees are a core element.

Simultaneously it should be ensured that Europe maintains its position in space exploration and participates in the development of new space-based technological solutions.

## **14 Implementation of the Framework Programme**

The success of the Framework Programme crucially depends on whether leading enterprises and universities/research institutions consider the research programmes one of the most important sources of their development and modernisation. In Denmark, we have detected a trend towards potential participants opting out of the European programmes on the grounds that extensive bureaucracy limits the advantages of participating considerably. This criticism must be taken seriously when organising the coming Framework Programme.

In and around the launch of the Sixth Framework Programme Denmark expressed scepticism towards the massive use of the new instruments. This is supported by the recent evaluation of the new instruments of the Sixth Framework Programme (Marimón Report). Denmark supports the report's recommendations on simplifi-

cation of application procedures, administration of grants, and a more flexible application of the new instruments.

Denmark finds it positive that the Commission has already initiated a number of modifications to accommodate some of the criticism voiced in the report. We would like to draw attention to adjustments that can stimulate the participation of enterprises and smaller units.

Denmark is in favour of continuing Integrated Projects and Networks of Excellence as instruments in the Seventh Framework Programme. At the same time, however, we find that greater flexibility is required in applying the instruments, especially when determining the number of participants in projects and consortia. The various instruments should be applied for the purposes they are best suited for. For some themes the objectives will best be achieved by using the new instruments; in other cases the traditional instruments such as specific targeted research or innovation projects or special support actions will be the most suitable.

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However, there is still a need to create greater clarity concerning Integrated Projects and Networks of Excellence before the next Framework Programme.

Denmark supports the continued and further development in the Seventh Framework Programme of instruments benefiting the participation of small and medium sized enterprises in matters related both to their own research activities and to cooperation with public research institutions.

The administrative burdens of the participants in the Framework Programme, including small and medium sized enterprises, should be reduced as much as possible. One of the means of reducing the number of qualified applications that are rejected could be to introduce a two-stage application procedure: a pre-qualification followed by a full procedure involving only the qualified applicants. This would reduce many applicants' professional and administrative costs of completing comprehensive applications with slim prospects of success.

The Commission is encouraged to ensure continuous availability of information and statistics about the implementation of the programmes, also including the participation of each Member State.

## **15 Coordination of national research programmes**

Denmark approves of increased efforts to coordinate national research programmes. However, the specific organisation and national funding should be discussed carefully.

Denmark is pleased to note that the ERA-net concept has been shown considerable interest. We therefore support that this form of programme cooperation is developed further in the Seventh Framework Programme.

Regarding programme cooperation based on Article 169 we see a need to draw up more specific guidelines on the preparation of such cooperation. Moreover, an agreement should be reached on which procedure to follow from the preparation of programme cooperation until the Council makes a decision.