



Danish position paper on the next EU framework programme for research and innovation

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1) Introduction

We live in a time of serious strain on public sector budgets and increasing global competition. Europe's competitiveness and the future standard of living depend on our ability to support and develop innovation in products, services and trade as well as in societal processes and models. The EU Framework Programme is one of the largest research and innovation investment platforms in the world, and it is therefore vital that the programme is rethought and planned in accordance with a growth-oriented agenda.

Europe must work together in areas where individual Member States lack the sufficient capacities and the critical mass to solve a given challenge by themselves. This especially applies to solving grand societal challenges.

At the same time, efforts to create a stronger link between education, research and innovation (the knowledge triangle) need to be targeted and specified in greater detail. A key prerequisite for a well-functioning knowledge triangle is mobility, where researchers move between knowledge institutions and the business community, both nationally and internationally, to acquire new inspiration and innovation capacity from other knowledge environments and other countries. Another significant prerequisite is access for researchers from EU Member States to well-functioning and competitive research infrastructures. Finally, it is necessary for Europe to focus on globally competitive research at the highest possible international level.

All resources must be utilised to support research and innovation in order to generate the necessary sustainable growth. Therefore the EU's structural funds should support the financing of research, innovation and education to a greater extent. It is also necessary to work systematically to ensure the research and innovation projects financed via the Framework Programme are of a high quality and effective. In conjunction with this, it is important to ensure an efficient evaluation culture that can identify which projects have been most successful.

Europe needs to increase its international involvement and should therefore do much more to join forces with major knowledge centres of excellence outside Europe. Instead of limiting the scope of the EU research policy to the Member States only, an active and outward-looking approach to international cooperation is necessary.

Instruments, rules and procedures of the framework programme need to be simplified significantly. Instead of viewing control as the starting point, the coming framework programme should have a more trust based approach. This would also be enabled by simplifying the framework programme. At the same time a higher degree of flexibility in project management should be ensured to increase the involvement of businesses in the framework programme.

All of these aspects need to be considered and incorporated into the design of the next framework programme, which should reflect the following basic priorities:

Europe should:

- Strengthen the link between research and innovation and increase the involvement of businesses
- Strengthen excellent research through a strong European Research Council (ERC)
- Ensure that simplification, trust and flexibility characterise the framework programme to a greater extent
- Focus research and innovation efforts on grand societal challenges
- Strengthen the framework for European research through targeted investments in research infrastructures
- Prioritise, strengthen and specify in greater detail international cooperation with countries outside Europe
- Improve mobility among researchers within and beyond the EU Member States

2) Strengthen the link between research and innovation and increase the involvement of businesses

As part of a growth-oriented agenda, both the Member States and the EU should focus on the actual output of the research and innovation funding. The new framework programme should ensure a stronger link between research and innovation, with growth as the ultimate objective. Research findings should be applied quickly within companies and public sector institutions. To achieve these objectives and to ensure a sustainable development after 2020 substantial funds should be invested in the development of for instance new technologies.

The Competitiveness and Innovation Programme (CIP) supports, among other things, innovation-oriented activities. It is crucial that an even better and closer connection be established between a new CIP and the new framework programme to ensure coherence between research projects and innovation projects.

Businesses, including SMEs in particular, generally operate with short timeframes within narrowly defined fields and in close proximity to the market. Participation in joint European research and innovation projects should reflect this reality to a greater extent in order to increase the involvement of businesses in the framework programme.

Specific recommendations

More research and innovation partnerships where the business community is involved from the beginning in defining the projects

The path from research to innovation is not a linear process, but a dynamic one that involves many different paths and detours. Research needs also arise in the business community and should be partnered with relevant research at research institutions. A prerequisite for dynamic cooperation

between research institutions and businesses is getting businesses involved in defining the research projects from the beginning in partnerships. Design of future partnership models should be based on the extensive experience with partnerships in the form of Joint Technology Initiatives, Public-Private Partnerships, Knowledge and Innovation Communities and the positive experience under the Cooperation Programme with SME-oriented instruments with high requirements for industry and SME participation combined with close contact to end-users.

Greater flexibility for involving businesses through improved possibilities for implementing contractual changes

As projects give rise to new knowledge, involvement of new businesses can contribute to converting the newly found knowledge into product innovation. Today, however, there are significant administrative burdens and long timeframes associated with affiliating new businesses as project partners through contractual changes. It is therefore necessary to make contractual changes easier and more flexible.

Consideration should be given to making the European Industrial PhD pilot project permanent

There must be focus on all aspects of the knowledge triangle, especially education, in order to strengthen entrepreneurship. The business community should be involved in defining the need for education and supporting researcher training. Denmark has many years of success with a national Industrial PhD scheme in which businesses and universities join forces to plan and finance PhD programmes.

It is vital for a European Industrial PhD scheme to maintain knowledge transfer from research institutions to businesses as the main objective. Furthermore, it is important to ensure that a European Industrial PhD scheme is complementary to existing national schemes. The current pilot being initiated under the People Programme must be evaluated in depth and if the evaluation is positive consideration should be given to making it permanent.

Research and innovation partnerships should be able to use funding for demonstrations and testing

When the research results are available, the next step towards the market is often testing or demonstrating the results. However, this is often very costly and therefore difficult for businesses, especially for SMEs, to execute. Future partnerships should be able to address this challenge by receiving funding for this stage in the development of new innovative solutions. The scope of the support for demonstrations and testing should be adjusted to accommodate the fact that the activities take place relatively close to the market so significant private co-financing should be required, as is also the case in the current framework programme.

Greater business involvement through more non-thematic funding and broader calls for applications

The short timeframes in which businesses operate make it crucial that short-term instruments are in place that can accept applications more often, such as twice a year. This is difficult for SMEs under the thematic programmes as they are forced to wait for a call that is appropriate for their project. In order to address this issue, the number of non-thematic, bottom-up driven funding opportunities aimed at SMEs should be increased significantly.

In the current Capacities Programme, funding is granted to non-thematic, bottom-up driven project proposals from SMEs through the 'Research for the Benefit of SMEs' programme and through the framework programme's co-financing of Eurostars. Both programmes are non-thematic and bottom-up driven. Eurostars is very flexible, with two rounds of calls annually and good contact with the applicants through the national administrations. The amount of funding earmarked for these two programmes should be increased.

One point of criticism concerning the calls for application under the Cooperation Specific Programme is the fact that these calls have been too narrowly defined. This can make it more difficult for businesses to participate. At the same time, the narrowly defined calls for applications make it more difficult to execute interdisciplinary projects and leave less room for researchers to define their projects. Therefore, an effort to broaden calls for application is needed in future strategic research programmes.

3) Strengthen excellent research through a strong European Research Council

Excellent research can lead to pioneering results, which can be transformed into new business opportunities. In the long term, such results can contribute to answering the grand societal challenges that Europe faces. It is therefore essential that Europe invests more in excellent research that leads to pioneering results.

The European Research Council (ERC) supports excellent research and is considered a success, enjoying high international recognition in the research community thanks to, among other things, its relatively simple, accessible and flexible application procedures and types of funding.

Specific recommendations

ERC's budget should be increased

The ERC should be reinforced in the next framework programme. The ERC is a key to strengthening the bottom-up driven excellent research that can generate pioneering results. The ERC's success rate up to May 2010 was approx. 14 per cent, which is below the average compared to the three other FP7 Programmes. The fact that too many excellent applications are rejected, underlines the need for a relative increase in funding for the ERC.

Excellence must remain the only ERC selection criterion

The status of excellence as the only ERC selection criterion must be maintained. This is vital to ensuring that Europe continues to have researchers who are among the best in the world and that Europe is able to retain the most talented researchers.

Research teams should be able to apply to the ERC

The ERC should make it possible for research teams to apply for grants. This will enable the ERC to support cooperation across national borders, thus increasing European added value. However, increased focus on cooperation across national borders must not take place at the expense of research excellence. Furthermore, each project still ought to have only one principal investigator responsible for the grant, as well as being responsible for ensuring an excellent level of research.

4) Ensure that simplification, trust and flexibility characterise the framework programme to a greater extent

The European Commission's continuing efforts to streamline and simplify the framework programmes are crucial to ensuring the greatest possible benefit from the EU's research funding as well as attracting applications from excellent researchers and innovative businesses. Easing the application and executive burden for the framework programme users has to be a core focus for the framework programme. The users should spend their time on research and innovation, not on administration.

The European Commission has taken an important step towards simplification under FP7, but additional initiatives are needed. Consequently, the next framework programme should be based on less administration and greater flexibility. At the same time, we recommend a moratorium on new instruments and that the framework programme is made more user friendly.

Specific recommendations

Less administration

Reporting requirements should be simplified by reducing the number and size of reports and their scope. In particular, Denmark recommends reducing the number of so-called periodic reports which contain both financial and scientific parts.

The European Commission must accept the various time recording systems and methods of calculating cost of effort in projects in the institutions of grant holders.

Time-to-grant should be significantly reduced. In relation to SMEs, time-to-grant can be reduced via SME certification schemes in Member States. If national SME certification schemes are introduced in Member States the Commission does not have to verify the status of the SMEs and the negotiation stage is thereby shortened.

More trust

The next framework programme should shift from a control based approach to a more trust based approach, which would also be enabled through simplification of the framework programme. The Commission's proposal of increasing the tolerable risk of error should be considered so as to achieve the right balance between risk and control.

More flexibility

More flexibility is needed in order to raise the degree of freedom for participants in the management of projects when creating, building and adjusting consortia. The involvement of new beneficiaries must be made easier in particular the ones ensuring capitalisation of innovative results. Simplifying administration in order to ease affiliation of new beneficiaries and ensure flexibility is a key objective.

The principle of allowing grant beneficiaries to choose between having their overhead calculated based on the actual costs or based on a fixed percentage rate of 60% should be upheld. It is also important that the applicants clearly understand whether this choice is available to them or whether they need to establish systems for calculating the actual costs in case the fixed percentage rate option is eliminated.

Fewer and more coherent instruments

As has been pointed out by the Innovation Union Flagship Initiative and the mid-term evaluation of the framework programme, the high number of uncoordinated instruments is problematic. Duplication of instruments should be avoided. All instruments should be re-evaluated to ensure that there are fewer overlaps – and no new instruments should be established without clarifying the area covered by existing instruments.

Fewer special rules

The number of special rules applicable to the individual research programmes and project types is too large. It is important not to introduce additional special rules and exceptions, but rather to reduce

them to make the framework programme significantly more user friendly. The same set of rules and the same procedures should, to the greatest extent possible, be used in the framework programme as well as in the implementation of programmes such as ERA-NET plus, Article 185 and the JTIs.

More uniform interpretation of the rules within the programmes and across the programmes

It appears to be relatively common for the same set of rules to be interpreted differently throughout the Commission. For instance rules regarding the calculation of working hours and determination of exchange rates are interpreted differently by different employees in the Commission under the People programme. A uniform internal interpretation and administration of the rules must be ensured.

The rules for intellectual property rights should be made more understandable and uniform for all research programmes and project types

The rules for intellectual property rights are extremely complex. The users of the framework programme are therefore often forced to seek expert help to interpret the rules and to ensure that their interests are taken into consideration. Furthermore, the provisions for intellectual property rights differ depending on the rules for participation that govern the programmes as well as on the grant agreements upon which they rest. The rules for intellectual property rights should therefore be made more understandable and uniform for all research programmes and project types.

5) Focus research and innovation efforts on grand societal challenges

European research cooperation ought to focus on the common Grand Challenges in European society.

To secure cohesion between the different initiatives launched to address grand challenges should be a central objective in the framework programme. A central aspect in this regard is to establish a strong link between the joint programmes and European innovation partnerships and the strategic focus areas of the framework programme.

Denmark agrees with the assessment set forth in the mid-term evaluation of the framework programme that the many strategic partnerships under the Cooperation Programme represent an important and valuable contribution to realising the European Research Area. However, the current thematic structure lacks the flexibility needed to target the strategic research projects to a limited number of grand societal challenges. As it stands, the current thematic structure faces a challenge in implementing the interdisciplinary approach needed to address grand challenges. Social sciences and humanities - and their link to natural sciences for instance - play an important role in this process.

Specific recommendations

The framework programme should have a strategic programme with primary focus on grand societal challenges

The next framework programme should comprise a strong strategic programme with a primary focus on a limited number of grand societal challenges. Grand societal challenges could be e.g. to improve European competitiveness through the development of effective production systems; to reduce the dependence on fossil energy sources; to improve resource efficiency, to improve the state of health of the European population and thereby decrease health sector costs; and to ensure sufficient and healthy food in Europe and globally. These grand challenges should interact with a number of

thematic research sub-programmes. Inspiration can be found in the current Public-Private Partnerships, where the European Commission issues cross-thematic calls for applications within subject areas aiming to solve grand societal challenges.

The Member States should be involved at an early stage in the process of selecting which grand challenges to focus on

The Member States and other stakeholders should be involved at an early stage in the process of selecting which grand societal challenges to focus on. Denmark supports the European Commission's proposal in the Innovation Union flagship initiative that a European Forum on Forward Looking Activities is actively used in this process. It is vital that this forum bases its analyses on the comprehensive material that is regularly prepared by Member States.

6) Strengthen the framework for European research through targeted investments in research infrastructures

In order for the EU to continue to be able to attract and retain the most talented and the best researchers in the face of intensifying global competition, it is vital that the framework and facilities offered are attractive. Investment in research infrastructures is therefore a central part of the effort to reinforce the future position of European research and strengthen the capacity building of the European research environments.

Experience from previous framework programmes and current collaborations in the area of research infrastructures in Europe demonstrates that a joint effort in this particular area can boost European research and create genuine European added value.

The financial crisis has presented a challenge in recent years to existing collaborations on European research infrastructures and the ambitious targets for realising the European research infrastructures that have been prioritised by the European Strategy Forum on Research Infrastructures (ESFRI). This places high demands for a focused and prioritised effort in areas where the need and benefit are greatest from a European perspective.

Specific recommendations

The financial framework for research infrastructure should be expanded

In recognition of the importance of research infrastructures to the EU's competitiveness, the development of the ERA and increased European cohesion, it is vital to expand the financial framework for the research infrastructures programme. The utilisation and development of research infrastructures must be given a higher priority in the framework programme than previously.

Based on a general requirement for scientific excellence, better cohesion should be established between the framework programme and other sources of funding, such as the EU's structural and cohesion funds. The development of distributed research infrastructures organised with nodes located in different countries as well as the enhanced use of IT-based remote accessing should be explored.

The framework programme should finance research infrastructure construction, access and operations

European researchers across Member States should continue to have access to the best existing research infrastructures through an ambitious access programme. At the same time, an effort should be made to ensure increased and stable financing of excellent European research infrastructures

through support for construction and operations. The selection of new research infrastructures should be based on the roadmap prepared by ESFRI.

7) Prioritise, strengthen and specify in greater detail international cooperation with countries outside Europe

In a world characterised by intensified globalisation, it is increasingly important that Europe cooperates with major knowledge centres of excellence around the world.

Europe must be a dynamic and solid partner in cooperative efforts to address grand societal challenges, which not only take on a European, but a global scope. In this regard, it is important that Europe stands united and – where appropriate – speaks with one voice in international forums in order to maximise European influence, e.g. in connection with the establishment of new major global research infrastructures.

Specific recommendations

Greater coherence between the framework programme and the Strategic Forum for International S&T Cooperation (SFIC)

Multilateral and biregional cooperation are currently supported through the framework programme, and the participation of third countries in the framework programme has increased in recent years. The framework programme's support for international cooperation through the Capacities Programme should be more focused and should support the new partnership between the EU and its Member States with regard to strategic initiatives for increased research and innovation cooperation with third countries under the auspices of the Strategic Forum for International S&T Cooperation (SFIC).

The framework programme should be made more open through more S&T agreements with third countries

The framework programme should be made even more open to allow researchers from third countries to apply to the framework programme for funding. Historically, countries having an S&T agreement with the EU have a higher propensity to participate in the framework programme. By increasing the number of strategically focused S&T agreements, the openness of the framework programme can be enhanced.

This openness on behalf of the EU presupposes a mutual reciprocity from countries granted access to the framework programme. European researchers would be likely to benefit from these reciprocities of third countries, achieving greater access to global knowledge networks as well as greater mobility.

8) Improve mobility among researchers within and beyond the EU Member States

Researcher mobility and training are crucial for creating world-class European research environments. Researcher mobility within Europe must be strengthened and Europe needs to attract more researchers from countries outside Europe. Many different employment structures and career paths across Europe pose significant barriers to researcher mobility in Europe. Strong European mobility programmes are therefore vital. The status of the People Programme as a specific research

programme in the next framework programme should be maintained to ensure continued focus on mobility. Furthermore, the freedom of research within the actions should be maintained to make them independent of various themes in a future framework programme.

Specific recommendations

More funding for Initial Training Networks

The Initial Training Networks (ITN) initiative is one of the most important Marie Curie Actions as it supports research careers at an early stage. The ITNs support young researchers' access to established research teams, thereby improving their career options. The training of young researchers within transnational environments is key to boosting the level of excellence in Europe (EU12) and should therefore be strengthened in the next framework programme.

The Marie Curie Actions should focus more on cooperation between the business community and public-sector research institutions

Cooperation between the business community and the public sector research institutions should be further increased via the Marie Curie Actions. The Marie Curie Actions should therefore be made more visible to industry, which should be actively involved in the training of researchers, also with a view to improving career paths within and across sectors. This is a good example of how the knowledge triangle (research, education and innovation) can be further specified.

More funding to attract non-European researchers

The next framework programme should support efforts to attract third country researchers to Europe to help establish even more excellent research environments in Europe. The share of the Marie Curie programmes which accept applications for releasing non-European researchers from their obligations so that they can come to Europe for specified periods of time should therefore be increased.