SINTEF

SINTEF Konsernstab
Postadresse:
Postboks 4760 Sluppen
7465 Trondheim

Besøksadresse:
Strindvegen 4
7034 Trondheim

Sentralbord: 73593000
Direkte innvalg: 73593071
Telefaks: 73593350

info@sintef.no
www.sintef.no
Foretaksregister: NO 948 007 029 MVA

Kunnskapsdepartementet
Postboks 8119 Dep.
0032 Oslo

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INNSPILL TIL EU-KOMMISJONENS GRØNNBOK OM FRAMTIDIG EUROPEISK FORSKNINGSPROGRAM

Vedlagt følger SINTEFs innspill til EU-kommisjonens Grønnbok om framtidig europeisk forskningsprogram.

Med vennlig hilsen
SINTEF

Unni Steinsmo
Konsernsjef

Vedlegg

SINTEF Response to the European Commission Green Paper From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation Funding COM(2011) 48

SINTEF welcomes the publication of this Green Paper and the opportunity to offer its views on future European Union research and innovation funding.

SINTEF has about 2100 employees and has a turnover of 350 million Euros. It is the largest research and technology organisation (RTO) in Scandinavia and a major beneficiary in the European framework programmes for research. SINTEF has been involved in European research since Norwegian participation in the framework programmes became possible and is the largest Norwegian beneficiary. SINTEF has been acting as project coordinator in many projects. SINTEF is a member of EARTO (European Association of Research and Technology Organisations) and this response is in line with the response from EARTO.

Our comments focus on aspects and issues of particular relevance RTOs. We do not address all the questions posed in the consultation document, but our remarks follow the general structure of the Green Paper.

KEY MESSAGES

- SINTEF appreciates the new focus on Innovation in the CSF very much.
- Number and complexity of instruments should not be increased. Cooperation research is considered to be a successful format and should be maintained as the core component of the CSF.
- For all instruments: Excellence is the most important selection criteria for research and development. However, open procedures and easy access (esp. for SMEs) is crucial
- More and substantial simplification is evidently needed.
- RTOs are in the best position to bring the main actors of the innovation system together. They offer substantial contributions towards the "Societal Challenges" and Joint Programming. This can be based upon Strategic Research Alliances of RTOs

A STRATEGIC FOCUS

SINTEF agrees to a broad consensus that future EU funding programmes should focus on EU 2020 priorities, address societal challenges and key technologies, and facilitate collaborative and industry-driven research. In essence this is the major part of what is designated the shift towards a "Green Economy". It is key that the western world also adapt to such a shift given the demands we put on developing countries to build their way to prosperity along the "green path".

Administrative simplification and scientific excellence should also be prioritized. Research is to be "instrumentalised" in the service of innovation. SINTEF broadly welcomes this strategic approach, while emphasising the need to resist wholesale redesign for its own sake: what works well and serves the innovation agenda should be retained. When research and development, innovation, societal challenges and industrial strategies are connected in a strategic framework Europe will have a common platform for further development.

THE PROGRAMMATIC SCOPE OF THE PROPOSED FRAMEWORK

In adopting the approach of a "Common Strategic Framework"(CSF), the Commission appears to have opted against substantial restructuring of existing programmes. In a general sense, this is probably wise: it recognises that different programmes have different first-order objectives, even though they may have second-order objectives in common. Nevertheless, SINTEF continues to believe that integration of large parts of the Competitiveness and Innovation Programme (CIP) with the RTD Framework Programme (FP) would be beneficial

The Structural Funds (SF) fall outside the scope of the CSF, although synergies are to be sought, and similarly for sectoral policies (e.g. rural development, public health, etc.). The challenge for the Commission will be to break out of the "vertical thinking" which has often hampered its previous attempts at inter-service coordination. Moreover, the sought-for synergies must be real and significant. For example, in relation to the SF, there should be a broad alignment between the SF and the CSF of funding conditions for research and innovation projects such that the same key players are effectively incentivised to participate in both arenas. Regional policy should be aligned with EU2020 objectives and a larger share of the SF budget should go to research and innovation, which have been recognised as key priorities for EU economic strategy.

LESSONS FROM CURRENT EU RESEARCH AND INNOVATION PROGRAMMES

The Cooperation Programme in FP7 has helped member states and associated countries to create sustainable research groups through collaboration across Europe. Establishment of European Technology Platforms (ETPs) in essential fields and the European Strategy Forum on Research Infrastructures (ESFRI) are valuable and positive results from the current programmes. Lessons from the framework programmes show that the participation of RTOs makes a difference. Industrial participation in countries with industrial oriented RTOs is higher than countries without a significant RTO sector.

Among the lessons from present programmes cited in the Green Paper, there is a certain emphasis on the need to better "coordinate" EU and national funding. This is a longstanding objective of successive Commission research programmes, which however have had only limited results thus far. In a globalising world in which Europe faces growing competition from rapidly developing, continent-wide countries, the Commission is correct to emphasise again the need for a concerted European-continental response. It falls to the Member States (MS) and Associated Countries (AS) to respond positively to the Commission's call for greater coordination.

WORKING TOGETHER TO DELIVER ON EUROPE 2020

The indicated single entry point with common IT tools or a one-stop shop will be welcome. Critically important, however, will be real progress in administrative simplification, including a streamlined set of funding instruments with common rules whenever possible. The recent package of simplification measures – permitting the use of average personnel costs, the remuneration of non-salaried SME owners, and ensuring a common interpretation of FP rules across Commission services and agencies – is very welcome. Those measures must now be made to work in practice.

The widespread use of flat rates, lump sums or unit costs – which may be collectively labelled "fixed amounts" – is broadly unwelcome for beneficiaries. The norm in enterprices and RTOs is real-cost accounting. Thus actual cost reimbursement is the preferred method of financial support. This is all the more so since political pressure tend to reduce the value of fixed-amount reimbursements, thereby reducing the incentive for many beneficiaries to participate.

There appears to be a growing acceptance that further public co-funding may be needed post-research in order to help ensure that invention becomes innovation, notably funding for proof of concept, piloting, demonstration etc. The CIP has shown, with the modest resources available, how such funding, e.g. for eco-innovation and ICT applications, can boost innovation. There is now a need and opportunity to significantly ramp up this kind of support, which should be applied across the future research and innovation programmes, and across themes and priorities. The assistance given should be as seamless as possible, but not automatic. An objective evaluation should determine when research results merit follow-on assistance, but an element of "automaticity" could be provided by conditionally "reserving" follow-on funding for assisted projects. The introduction of such a post-research funding facility will require substantially increased resources compared to the present Framework Programme. A further precondition will be to ensure that the State Aid Framework for Research and Development and Innovation is suitably adapted.

SINTEF proposes that JPIs should be launched only when a group of Member States and Associated Countries is prepared to make binding commitments of adequate resources to a commonly agreed work programme, with a real common budget for core management functions. JPIs should be impact-driven and focus on clear deliverables. Each JPI should employ a commonly agreed procedure for selecting the research to be funded and participating Member States and Associated Countries should commit in advance to accepting the resulting selection.

Future EU research and innovation programmes must strike a balance between smaller projects and larger ones. The Green Paper asks about the appropriate "balance between smaller, targeted projects and larger, strategic ones". This would appear to imply that a primary focus on societal challenges would crowd out smaller projects. This is surely wrong. Tackling societal challenges will only be possible by breaking down the headline challenge into specific, tractable objectives and deliverables, for many of which smaller projects will be appropriate. There is then the question of whether targeted projects will be more appropriate in specific cases than a more bottom-up approach. In practice, all options are likely to be needed, from case to case.

Performance indicators should be linked to implementation of and added value from the research results; we will need indicators that can quantify these issues. Such indicators – e.g. economic ones – should be specified in the calls, and should be subject to follow-up and reporting during and after the project period. For industrial/innovation projects these indicators should have a higher focus than the academic ones.
Success could be measured along three dimensions:

- Research success, such as no. of papers, patents, courses, workshops/seminars, conferences, Open Source Software (OSS), and standards…
- Innovation success, such as no. of patents, OSS, and standards, new products/services/processes, reduced cost and/or time-to-market, increased efficiency…
- Business success: no. of new partnerships and markets, increased market shares and/or ROI…

These dimensions may have different weight according to which type of instrument that is measured, a pure research project should mainly focus on the first two, and an innovation project more on the latter two. However, it is important to have in mind that it will take years before results from projects and programmes show their real potential.

To strengthen the effect of both national, regional and EU funding of projects, national and regional projects could build on and complement EU funded projects, whereas EU funded projects should have impact on the national / regional level. Increasing the awareness of actors in the whole ERA on these relations will make a better and more effective impact of research and innovation in Europe.

In terms of working together – SINTEF would like to point to the establishment of the European Energy Research Alliance under the SET-Plan as a type of instrument that can foster joint programming and contribute to defragmenting EU research. However, the EU should encourage such actions much stronger and direct invest in them for fulfilling their tasks.

TACKLING SOCIETAL CHALLENGES

The Green Paper asks how a stronger focus on societal challenges should affect the balance between curiosity-driven research and agenda-driven activities. Again, the assumption seems to be that agenda-driven research could crowd out curiosity-driven work. This needs not happen, and should not be allowed to happen: SINTEF considers that both should continue to receive support in future EU research and innovation programmes.

A more delicate question may be the balance between targeted vs. bottom-up curiosity-driven research, for it is perfectly feasible to target curiosity-driven research by specifying fields or subjects in which such research will be supported. SINTEF believes that strategically focussed programmes for tackling societal challenges will from time to time need to commission targeted curiosity-driven research. Therefore a too unbalanced strategy favoring for example agenda-driven research may in a longer run reduce a society's ability, capability and sustainability in meeting new societal challenges not yet foreseen.

Research and innovation should preferably make up the foundation for future politics – do the fact-finding and create the solutions for the future society.. Instruments such as ETPs, Industrial Associations, Research and Technology Associations, etc. are all representing important stakeholder's interest, and the stakeholders should be encouraged to take part in preparatory work for policy making and in forming and shaping future activities. The reference in the Green Paper to the strategic approach of the SET-Plan is entirely appropriate.

To attract greater interest and involvement of citizens and civil society we (the research society including the research active industry) should be more focused on communicating to the society/the people who need our results and ideas – in an understandable way, and not hide away our findings in academic papers and academic language which is only accessible to a small elite. This could also be part of a performance indicator for the projects.
Include space and opportunity for activities concerned with visibility and more futuristic presentation of the concepts, prototypes, results, etc. This will attract the public in large, and even more so investors and venture capital which need to take a more pro-active role in the research/innovation value chain.

STRENGTHENING COMPETITIVENESS

The introduction of European Technology Platforms (ETPs), Joint Technology Initiatives (JTIs), the EIT, and Public Private Partnerships (PPPs) has given business, particularly large enterprises, considerable scope to participate, in a leading role, in FP activities. That is to be welcomed. ETPs have proved particularly useful for research-mapping activities.

ETPs, and the cross-sectoral co-operation between them, are important, and could play an even more active and pro-active role with a better support, such as through coordinated and support actions to ensure a basic funding which will ensure and strengthen the effect of ETPs' contributions to both national, regional and EU research and innovation policies. But the ETP's will need resources, and a position. And they need to be organized in a way as to attract a majority of their stakeholders as members. Maybe the PPP scheme is the best solution for many of the ETP's – provided this entails a broad responsibility, which can also be reflected on National level

Some of these instruments and initiatives are not working as well as intended. Certain JTIs, notably ARTEMIS and ENIAC, suffer from their Eureka-style funding model, whereby some Member States/Associated Countries do not commit sufficient resources, or do not honour fully the commitments which they have made by imposing a narrower scope of topics to their national participants, so that not all selected projects or project participants can be funded. This type of funding model is particularly ill-suited in the case of world-class research players located in small countries with correspondingly low JTI budgets: the limited funding practically excludes the world-class research player from participating in much of the programme. The limiting effect of Eureka-style funding models must be recognised, and compensated for, in order that the best qualified players can engage fully in European programmes.

Other JTIs have introduced funding rules which are unattractive for many research performers (RTOs and universities), notably a 20% cap on overhead costs. The Innovative Medicines

Initiative (IMI) has also developed IP-handling policies that are one-sided and dissuasive. A further necessary simplification in future European research and innovation programmes is, therefore, that a default regime of funding models and participation rules should apply across all programmes, with exceptions being permitted for particular schemes and initiatives only for specific, compelling reasons.

Future EU research and innovation programmes should ensure that Europe would be attractive to the multi-national companies. When these companies establish or continue to have research, development and innovation in Europe is an indicator for success and a must for Europe.

Future EU research and innovation programmes should continue to support SMEs, in particular SMEs with prospective high-growth potential beyond national borders. Given the new emphases in the Innovation Union proposals and in the current Green Paper, on mobilising public procurement to stimulate and support innovation, on coordinating EU and national/regional resources, and in view of the encouraging EUROSTARS experiment in marrying national and EU funding, SINTEF sees an opportunity for a new kind of integrated SME support framework.

We must have in mind that there are a lot of categories of SMEs, and only a small minority of them is technology developers or –providers. Most SMEs will be followers of technology, to be supported locally or nationally, not having the resources or interest for research and innovation. However, experience shows that a lot of creative ideas, novel solutions and innovations can have an easier birth in SMEs than in larger and more bureaucratic companies. The challenge, however, may be the resources (economic, people, competence) to bring the ideas into fruition. The EU funding systems traditionally have discouraged the SMEs due to their complexity and timing. This is obviously an area where more bottom-up approach (like the EUROSTARS combination of EUREKA and FP) could be suitable.

Pre-commercial procurement can be a powerful tool for driving innovation. The Commission should continue to encourage development of substantial pre-commercial procurement schemes. A useful approach could be to agree a target for spending a certain percentage of the procurement budgets on innovative procurement. Pre-commercial procurement could also be employed to support pilot and demonstration activities in the new EU research and innovation programmes.

Rules relating to IPR must strike a good balance between considerations about access/dissemination and competitiveness. The earlier Innovation Union proposals contained unfortunate wording that seemed to suggest that political priority should go to open access to all FP-funded research results. The Commission should state clearly that its intended wish is to maximise open access to FP co-funded results <u>already</u> in the public domain, generalising what has been introduced by the Open Access pilot. Competitiveness considerations will generally tend to favour the "privatisation" of research results, and given the new emphasis on innovation, this tendency would seem likely to be stronger in the future.

STRENGTHENING EUROPE'S SCIENCE BASE AND THE EUROPEAN RESEARCH AREA

SINTEF welcomes the role of the European Research Council (ERC) in supporting the drive for excellence curiously driven European research. However, the ERC's focus on individual researchers and research groups are problematic for RTOs, which have a more corporate approach to the organisation and management of research. Excellent researchers and research groups at RTOs are hardly able to get an ERC-grant based on the excisting evaluation rules developed for university researchers. In addition, the ERC's "individual-centric" rules on IPR can contradict an RTO's policy on corporate ownership of IPR generated in-house.
This is a need for strategic innovation driven research for excellence in demand driven research. Further emerging technologies need a continuous focus to make Europe competitive.

Marie-Curie Actions (MCAs) are welcomed by SINTEF, although a practical difficulty sometimes arises due to the general articulation of MCAs around "industry" and "academia". The funding model and overall corporate practice of RTOs corresponds fully to neither one nor the other, so that it is sometimes difficult for an RTO to know "which box to tick". The introduction of an additional category for RTOs, or clarification by other means, would be welcome. The Marie Curie Actions should also take into account different funding schemes depending of the applicants' current situation and future obligations. In particular, there are important issues faced by a candidate moving from a country with high cost level, and a fairly high standard of living, to some other part of Europe where the same condition is not apparent. However, equally important issues are relevant for candidates moving the other way. Marie Curie Actions need to balance and make a more individual handling of these issues. This is important if EU significantly wants to increase the mobility of researcher in Europe.

Every field in research that reach gender balance experience a wider perspective and positive development, both due to scientific level and social wellbeing. Therefore, the role of women in science and innovation should be strengthened through a systematic attention on gender balance in projects and its management, in committees and in selection of evaluators and reviewers as a start. Gender balance could in addition be one of the evaluation criteria for project selection and in reviews are being done.

SINTEF welcome the CFS's increased attention to research infrastructures and look forward to the initiative being extended to medium-sized facilities as well as to shared infrastructures, e-infrastructures, collections and other infrastructural resources.

The drive to complete the European Research Area requires the introduction of EU-funded Strategic Research Alliances. They are needed as a strategic instrument serving the ERA objective of reducing fragmentation and duplication of research in Europe by encouraging RTOs – together with universities and industry where appropriate – to join forces in the establishment of longer-term cross-border strategic research programmes. European funding of such Strategic Research Alliances would counter the "lock-in" effect which national core funding can produce and which can hamper the cross-border operation of RTOs.