# Norwegian Positions on Horizon 2020

The Commission has presented an ambitious proposal on the next framework programme for research and innovation, Horizon 2020. By demonstrating the crucial role in which research and innovation can create economic growth in Europe, by addressing key societal challenges where European cooperation in research and innovation is essential, and by highlighting the importance of excellence both for scientific breakthroughs and for reaching other policy goals, Horizon 2020 is a solid basis for placing research and innovation high on the European agenda in the coming years.

European research cooperation is a priority to Norway and we take great interest in the development of Horizon 2020. We presented our preliminary comments on some issues concerning the next framework programme to the Danish presidency, the European Parliament and the European Commission in February this year. Those comments are integrated in this paper.

Norway welcomes:

- The introduction of radical simplification measures, including a common set of rules, simplified accounting methods and audits and fewer controls.
- The strengthening of the ERC.
- The emphasis on societal challenges common to all or most European countries.
- The emphasis on research on climate issues, renewable energy and the environment.
- The integration of social sciences and the humanities in all societal challenges.
- The continued support for developing and securing access to world-class research infrastructure.
- The emphasis on strengthened involvement of business, including SMEs, in European cooperation in research and innovation as a measure to stimulate economic growth in Europe.

Still, we believe that there is potential for clarifying and developing parts of the proposal further. Norway would therefore like to express concern about:

- The elimination of the option of full-costing as the basis for reimbursement of indirect costs.
- The weak integration of marine and maritime research in Horizon 2020.
- The lack of concrete measures to improve the gender balance in all aspects of Horizon 2020.
- The unclear complementarities between Horizon 2020, Erasmus for all, the Cohesion Funds and COSME.
- The weak integration of knowledge triangle policy throughout Horizon 2020.

Concrete proposals for amendments of the legislative text on the framework programme, COM (2011) 809 final, for the legislative text on the rules for the

participation and dissemination in Horizon 2020, COM (2011) 810, and for the legislative text on the specific programme, COM (2011) 811, prepared at administrative level, are included in annexes.

# **Excellent Science**

# Marie Curie Actions

Norway supports the importance of facilitating mobility and collaboration between academia and industry as well as interdisciplinary research careers by flexible schemes for short-term stays and part time and combined research positions. Marie Curie Actions represent an important instrument in this regard. The Marie Curie Actions should thus be developed further as instruments for direct knowledge transfer by bridging disciplines and sectors, stimulating new knowledge through diverse careers and strengthening the Knowledge Triangle.

## Proposal:

• The Marie Curie Actions should be developed further as an instrument for crosssector and cross-disciplinary mobility.

## Research Infrastructure

Research infrastructure constitutes an important pillar of European cooperation in research and innovation, and is an instrument with clear European added value. We therefore appreciate the contribution by Horizon 2020 to developing world-class European infrastructure.

Common use of research infrastructures, including e-infrastructure, plays an important role in structuring research cooperation, in building the ERA and in attracting the best international researchers to European facilities. Norway therefore supports continued funding for trans-national access to high quality research infrastructures in Horizon 2020.

The ESFRI Roadmap has stimulated national governments throughout Europe to develop national roadmaps for research infrastructure, often accompanied by earmarked national budgets for large research infrastructures. We therefore appreciate that Horizon 2020 will continue to support the European countries in their efforts to further develop cooperation on infrastructure and to implement the pan-European research projects on the ESFRI Roadmap.

However, we would like to express our concerns about the wording of point 4.1.1. in Part I of COM (2011) 811, stating that the objective of developing world-class infrastructure "will address specifically those infrastructures that are setting up or that have set up their governance, e.g. on the basis of the European Research Infrastructure Consortium (ERIC) or any equivalent structure at European or international level". For some international infrastructures, including research infrastructures on the ESFRI Roadmap, the use of national legal entities in addition to agreements securing international co-operation (governance) has proven necessary. Such research infrastructures should not be excluded from funding. This is important in order to secure progress in the process of realizing pan-European research infrastructures. We therefore propose that the legal text is clarified in regard to the governance structures necessary to obtain funding from Horizon 2020.

# Future and Emerging Technologies

The need for dedicated basic research in technological areas is at the centre of strengthening FET. In general, all technological research should in due course aim at practical application. In order to maximize the value potential of FET, the desired approach should be to combine relevance and potential usefulness with traditional academic quality criteria, while ensuring strict accountability.

## Proposal:

• FET should combine traditional academic criteria with relevance and potential usefulness.

# **Industrial Leadership**

Innovation is essential to maintaining a viable and dynamic economy, thereby ensuring competitiveness and well-being in all regions of Europe. Creating favourable conditions for industrial change in Europe is fundamental. Industrial restructuring through research and innovation can contribute to accelerating the process towards reaching the targets of sustainable and smart growth. The Industrial Leadership pillar has the potential to become a powerful tool to foster these transfers and create a strong bridge between Europe's science base and the societal challenges. Finding an adequate long-term balance in our priorities between already existing industry and up-and-coming companies is fundamental for long-term value creation in Europe. Industry's crucial role and potential contribution in R&I in regard to bolstering European competitiveness must not be underestimated.

# Proposals:

- Both the design of and the instruments in Horizon 2020 should aim at increasing industry participation and at strengthening the interplay between industry, universities and other research performing institutions.
- More emphasis should be given to involving industry in the further development of the Industrial Leadership pillar.

## **SMEs**

Norway endorses the proposal of stronger and more ambitious support for SMEs in Horizon 2020.

The new dedicated SME instrument that is supposed to work across Horizon 2020 can be an important tool to support different categories of SMEs. Adoption of a three stage approach similar to the Small Business Innovation Research model (the SBIR model) will make it possible to support different stages in the innovation cycle, making it possible to support activities closer to the market. However, the modalities of the new instrument need to be further clarified, such as the link to the six Societal Challenges and the Key Enabling Technologies. It is important that the instrument is open to all SMEs.

Norway welcomes the proposal of support for research intensive SMEs in Horizon 2020. A substantial part of the foreseen budget for Specific support in the chapter on Innovation in SMEs should be dedicated to the new joint programme building on EUROSTARS, in order to leverage even stronger commitments from Member States and Associated Countries, and from the SMEs themselves.

Norway believes that the Enterprise Europe Network could play an instrumental role in promoting participation by SMEs in Horizon 2020. We therefore find that linkages between the next framework programme and the Enterprise Europe Network should be strong. We are pleased that the network is mentioned in the proposal on Horizon 2020, but we believe that its role could be clarified further.

# Proposals:

- The new dedicated SME instrument which is to work across Horizon 2020 should be clarified.
- The role of the Enterprise Europe Network in stimulating SME participation in Horizon 2020 should be clarified further.

# ICT Research

The breadth of research subjects within ICT in Horizon 2020 is satisfactory, provided that they will take user-driven innovation in public and private ICT services into account. In this respect, we appreciate that Horizon 2020 may potentially address all stages in innovation processes. However, we are concerned that the share of research on ICT hardware issues in the Key Enabling Technologies part of Horizon 2020 seems to be very large compared to research on and development of ICT services and research on ICT implementation and use.

## Proposals:

- *R&D* in the service sector should be stimulated by focusing on collaboration between lead users and service providers/producers.
- Stronger links between SSH, technology and natural sciences would promote all types of innovation, and in particular innovation in services.
- Two areas should be given higher priority in the Key Enabling Technology and ICT parts of Horizon 2020:
  - Complexity and resilience in large ICT systems ("Systems of Systems"), which seek to understand the increasing complexity of critical ICT infrastructures.
  - Design, development and delivery of complex ICT systems, which put the technology-oriented priorities in the ICT programme in a user context.

# Service and User-driven Innovation

Demand side considerations are particularly important for succeeding in service innovation. Innovation in the service sector often relies on close customer dialogue, quick interaction between development and consumption, and even innovation models where the end users themselves act as developers. One could argue that existing EU funding contains a certain bias in favour of so called high-tech industrial sectors and upstream university-industry linkages, which in turn translate into a bias against innovation in services. To improve the balance one could address specific service sector needs by focusing on collaboration between lead users and service providers, for example in the ICT sector. In this respect, we believe that the initiatives which forge stronger linkages between SSH, technology and natural sciences are important to strengthen the academic foundation for advanced service innovation.

Furthermore, the notion of users must not be defined too narrowly. For instance, userdriven innovation in the health sector should not be limited to the consideration of patients' needs, but should also take into account the needs of relatives, employees and related markets. Furthermore, user-driven innovation requires involvement of users and market representatives at an early stage of innovation activities, when problems are specified. User involvement should thus not be limited to the stage when solutions are tested by potential users through demonstration, pilot activities and proof of concept.

## Proposals:

- The definition of "users" needs to be satisfactorily broad.
- Users and market representatives should be involved in innovation activities at an early stage.

# Demonstration and Pilot Activities

The inclusion of demonstration and pilot activities is an important factor in our quest to increase the number of research results successfully reaching the market. Horizon 2020 should state clearly the type of activities to be supported by grants, and the type to be supported by other means, such as loans. "The access to risk finance" line in the proposal on Horizon 2020 should therefore be balanced more towards the activities that are close to the market, thus to some extent protecting the grant budgets from the substantial costs represented by these activities.

This would also ensure a better correspondence with the principle of European added value. Traditionally, innovation policy has been the responsibility of the Member States and Associated Countries. By linking the innovation dimension with national funding sources and capital markets, Horizon 2020 could generate a better and more effective interface with national innovation systems.

# Proposals:

• The types of activities to be supported by grants and by loans respectively should be clarified.

• The division of responsibility between Horizon 2020, national funding sources and capital markets should be clarified.

# Size of Projects

We reiterate our position concerning the need to avoid pressure towards large projects and consortia. Projects should have a size that is proportional to the scope of the issues addressed and at the same time remain manageable for its partners. Excessively large research projects create several challenges: a danger of monopolising the direction of European research efforts in one area and a risk of missing out on results from other approaches chosen by competitors. FP7 has shown that a more flexible approach is needed.

## Proposal:

• Horizon 2020 should adapt a flexible approach to the question of project size and include smaller projects in open, non-thematic calls, which are conducive to the strategic needs of industry, including SMEs.

# Innovation Policy Analysis

The experiences from working on European levels with the development of new and better innovation policy tools in the Competitiveness and Innovation Programme have been very good. Norway would like to underline the importance of continuing and further developing these networks and attained competences in Horizon 2020: Policies related to i.e. clusters, service innovation, high-growth companies and demand-driven innovation are highly relevant areas for common European development and cooperation. Horizon 2020 should continue to fund policy analysis within these areas.

# **Societal Challenges**

Norway supports the overall outline of the Societal Challenges part of Horizon 2020. However, we would like to draw your attention to some issues which in our opinion need to be addressed more strongly both to solve common challenges and to increase Europe's competitiveness. Firstly, the synergies between Union and Member States'/Associated Countries' initiatives need to be further developed. Secondly, we believe that some thematic fields should be somewhat better integrated in Horizon 2020, namely marine and maritime research, interdisciplinarity and the social context of the grand challenges, Arctic research, climate and environmental research, biodiversity, and forestry and the forest.

Furthermore we would also take the opportunity to comment on some of the six challenges outlined in the Commission's proposal.

# Synergies between Union and Member States'/Associated Countries' Initiatives

We are pleased that the societal challenges have a prominent place in the Commission's proposal on Horizon 2020. Member States and Associated Countries have expressed their commitment to better coordination of their research on the societal challenges through the establishment of 10 Joint Programming Initiatives. There are clear

interlinkages between the societal challenges addressed in Horizon 2020 and those addressed in the JPIs. These interlinkages indicate that support from Horizon 2020 for the JPIs may further promote synergies between research and innovation on the societal challenges. However, there should be equal opportunities for support from Horizon 2020 for all JPIs.

# Proposal:

• All JPIs should be given equal opportunities for support from Horizon 2020.

# Marine and Maritime Research

Europe's seas and oceans have the potential to be both a source of answers to the grand challenges which Europe faces today as well as the potential to be a source of sustainable growth in Europe. Therefore, we welcome the recognition of marine and maritime research as part of the challenge "Food security, sustainable agriculture, marine and maritime research and the bio-economy".

However, Norway would welcome a more comprehensive integration of marine and maritime research in Horizon 2020. Marine and maritime perspectives are essential in a number of policy areas, including climate and climate change, energy, health, and transportation. Furthermore, a common knowledge base on the marine ecosystems, including effects of human activity, is essential in our sustainable management of Europe's seas and oceans and sustainable exploitation of marine resources. Marine and maritime research has the potential to find the causes and solutions not only to the challenge of "Food security, sustainable agriculture, marine and maritime research and the bio-economy", but to other challenges outlined in the Commission's proposal on Horizon 2020, in particular the challenges on "Health, demographic change and wellbeing", "Secure, clean and efficient energy", "Smart, green and integrated transport", and "Climate action, resource efficiency and raw materials". At the same time, seas and oceans represent an untapped potential for sustainable growth for Europe in various areas, including food, health, and tourism.

Therefore, marine and maritime research should be addressed as a cross-cutting challenge, and should be integrated as part of other challenges.

# Proposal:

• Marine and maritime research should be integrated as part of the challenges on "Health, demographic change and wellbeing", "Secure, clean and efficient energy", "Smart, green and integrated transport" and "Climate action, resource efficiency and raw materials".

# Interdisciplinarity and the Social Context of the Grand Challenges

Few and broad societal challenges allow for more interdisciplinarity. We support the integration of social sciences and the humanities in all challenges. Both the challenges themselves and the possible solutions need to be understood and addressed within a broad social and cultural context. Social sciences and the humanities therefore play an

important role in developing, legitimating and implementing new solutions and policy in society.

From our perspective security issues should not only be seen in a technological perspective, but need to be tackled within a broader societal context. We would therefore like to express our support to the outline of the challenge on "Inclusive, innovative and secure societies". However, a good integration of security and societal issues necessitates an appropriate balance between the different parts of the programme.

## Arctic Research

The Arctic is crucial to our understanding of climate change and covers a broad thematic spectrum including life sciences and environmental sciences. The Arctic is an early indicator of climate change, and changes in the Arctic affect the rest of Europe. Norway welcomes the great emphasis on climate change in Horizon 2020 and the possibilities therein for Arctic research. However, we believe that the role of the Arctic in climate change issues could be somewhat more explicit. Furthermore, we also believe that Arctic research, such as marine bioprospecting in the High North, could represent a source of sustainable growth.

## Proposal:

• Arctic research should be better integrated in Horizon 2020, especially in the challenge on Climate action, resource efficiency and raw materials.

# Climate and Environmental Research

Norway supports the strong emphasis on climate and environmental research in Horizon 2020, and we are pleased that several challenges address issues related to climate and the environment. However, we see a need for inclusion of cross-cutting activities to secure good coordination of climate and environmental research both across the six societal challenges and across the whole of Horizon 2020.

# Biodiversity

In addition to its environmental consequences, loss of biodiversity due to human activities might put the prosperity of the next generations at risk. We therefore propose to integrate biodiversity research within research on relevant sectors such as climate change, agriculture, energy, transport, fisheries and aquaculture. Furthermore, we believe that benefits from services provided by ecosystems should be integrated as part of the relevant activities in all six challenges. Ecosystem services are transformations of natural assets (soil, water, air, and living organisms) into products that are important to humans. Examples include provision of clean air and water, maintenance of soil fertility, maintenance of liveable climates, pollination of crops and other vegetation, control of potential pests, provision of genetic resources, production of food and fibre, and provision of cultural, spiritual and intellectual experiences. It is important to promote this integration of biodiversity and ecosystem services while maintaining baseline knowledge on biodiversity, including decision support for biodiversity policy and

management. This research is important to implement the "EU Biodiversity Strategy to 2020: towards implementation" and will give important contributions to the "Intergovernmental science-policy platform on biodiversity and ecosystem services" (IPBES).

# Forestry and the Forest

Europe's forests represent a potential source of sustainable economic growth and renewable energy. At the same time, the forest represents an important factor in environmental issues, such as biological diversity, and for the climate, i.e. by its ability to capture and store carbon. Research on sustainable utilization and management of forests, and research on the role of forests for the environment and climate should therefore be better integrated in Horizon 2020.

## Proposal:

• Research on sustainable utilization and management of forests and on the role of forest in environmental and climate issues should be integrated in the challenges on "Food, sustainable agriculture, marine and maritime research and the bio-economy", "Secure, clean and efficient energy", and "Climate, resource efficiency and raw materials".

# Health, Demographic Change and Wellbeing

We welcome the inclusion of health promotion and a broad approach to tackle the aging society under the challenge on health, demographic change and wellbeing. The healthcare sector is indeed a fundamental part of the European welfare system. An increased focus on clinical research and best practice research (comparative effectiveness studies) to optimise the delivery of health and care services is needed. Focus on the quality, safety, efficiency, and cost-effectiveness of health care systems as well as independent living is necessary to inform policy and improve social equity.

## Proposal:

• Clinical research, health services research and the interplay between the health and care sectors and the welfare systems should be further emphasised. A further emphasis on health services and the interplay between the health and care sectors and the welfare systems would therefore strengthen the societal relevance of this challenge.

# Climate Action, Resource Efficiency and Raw Materials

Raw material resources are under massive pressure and global markets cannot provide for the demand. Increased R&I activities are essential to rebalance this situation. Therefore, Norway supports the inclusion of the broad line of activity on *Ensuring the sustainable supply of non-energy and non-agricultural raw materials*. We welcome the explicit focus on a full life-cycle approach for mineral resources, which warrants a broad "knowledge triangle" strategy to ensure viable and sustainable innovation processes. A multitude of regulatory, industrial and environmental factors that are embedded in raw materials activities need to be addressed. Norway welcomes the Commission's launch of the new EIP on Raw Materials and is prepared to contribute to its realisation.

# Proposal:

• A broad application of the "knowledge triangle" is necessary in order to ensure the success of R&D activities regarding raw materials and more broadly the new EIP on Raw Materials.

# **Cross-cutting Issues**

## Simplification

Simplification is crucial in securing continued participation by those entities already involved in the current framework programme, as well as ensuring the inclusion of new participants in the upcoming Horizon 2020. We therefore appreciate the strong emphasis on simplification measures in Horizon 2020, both regarding the programme architecture, a more trust-based system, and enhanced user-friendliness.

However, we believe that simplification should be seen from the participants' perspective. Simplification should aim at both keeping participants already involved in the framework programme, as well as widening participation, both in general, and to SMEs and smaller academic entities specifically. By aiming for wider participation, simplification could also have a positive effect on European research seen from a regional perspective.

The overall objective of simplification of the financial framework should be to ensure a cost-model in EU research finance schemes that covers the *real costs* of research activities, regardless of scientific discipline, type of research organisation or the country where the research activity takes place. The agenda for the modernisation of Europe's higher education systems points to full costing as an important instrument in securing long-term sustainable funding of European universities. The EUA, in dialogue with the Commission, has actively promoted the introduction of full costing by European universities. In Norway, a full costing funding scheme has recently been introduced for research institutes.

The use of flat rates in some cases goes against the principle of full costing. Key participants from Norway, as well as important umbrella organizations such as EUA, EARTO, and BUSINESSEUROPE, have expressed concern regarding the Commission's proposal of a flat reimbursement rate of 20 % for indirect costs. For many participants, a flat reimbursement rate of 20 % will lead to reduced funding. The proposed rate of 20 % is expected to have negative effects especially in countries and scientific fields where the real indirect costs tend to be high.

Considering the long-term sustainability of research and research funding it is therefore important to retain the option of full-costing as the basis for reimbursement, i.e. reimbursement of costs for participants on the basis of indirect costs actually incurred. Many key participants in FP7 would welcome this in order to be able to participate fully also in Horizon 2020.

The legal measures go a long way towards answering the call for simplification. The proposed measures need, however, to be considered together with the provisions of the Financial Regulation, once this regulation is finalized. Introducing reimbursement of non-refundable VAT in the Financial Regulation would contribute strongly to needed simplification.

We wish to emphasize that strengthening of practical assistance and guidance to applicants in early stages of proposal preparation will be a key factor in simplification, alongside simplified rules. Such practical assistance could include guidance in setting up consortia, time planning for call submittance, practical guides to developing a plan for use and dissemination of results, etc. Norway is willing to contribute in developing such practical guidance.

There has been a proliferation of initiatives combining European and national resources during the last years, including FET Flagships, Article 185 actions, Joint Technology Initiatives, ERANET+, Joint Programming Initiatives and European Innovation Partnerships. Norway is concerned that this trend may go against the increased emphasis on simplification, making the European research landscape more complex and unpredictable. We are also concerned that some of these initiatives may be conceptualised and developed by actors without authority in matters requiring financial decisions. Norway would therefore welcome a streamlining of and principles for pooling of European and national resources in research and innovation, especially if broad participation of European countries in various financial situations shall be achieved.

## Proposals:

- There should be an option of reimbursement of costs on the basis of real indirect costs, i.e. indirect costs actually incurred, and
- The reimbursement rate for indirect costs should be increased.
- Practical assistance and guidance to applicants should be strengthened.

# Gender Balance

We are pleased to see that Horizon 2020 supports gender balance as an important factor in fostering excellent and innovative research, for tackling societal challenges, and increasing competitiveness. However, we consider it to be of great importance that these good intentions are turned into concrete measures in the further development of Horizon 2020.

# Proposals:

• An incentive system in support of projects with an integrated gender and gender equality perspective should be established.

- Gender balance (40/60) should be a goal in all decision-making bodies, i.e. not only in advisory boards, but also in programme boards and other decision-making bodies.
- Both the Commission and participating countries should develop target figures for the share of female researchers to be reached by 2020. Such target figures will ease the measuring of progress and achievement of objectives regarding gender balance.

# The Knowledge Triangle

We support the integration of research and innovation into one framework programme. However, we also find that Horizon 2020 should be a step in realizing a more coordinated policy for higher education, research and innovation, and the interaction between these three components. There is still a need to develop the concept of the knowledge triangle further, and in particular the role of higher education.

We agree that the EIT should be an important instrument in realizing the knowledge triangle. Still, the EIT is not sufficient for realizing a coordinated policy for research, innovation and higher education. Therefore, it is necessary to supplement the EIT with other instruments.

# Proposal:

• Knowledge triangle policy should be better integrated into all parts of Horizon 2020.

# Linkages to and Synergies with Other Union Programmes

Norway supports the ambitions laid out in the proposal on Horizon 2020 of creating stronger ties between research, development and innovation. Europe should emphasize the creation of excellent research results and ease the way from research to commercially successful products and services. To succeed in this, we find it essential that the different Union programmes supporting research, development, innovation and higher education work together.

We believe that the synergies with and linkages to other Union programmes should be clarified in the proposal on Horizon 2020. Firstly, the growing importance of research and innovation in the Structural Funds call for clarification of the relations, synergies and division of responsibility between the Structural Funds and Horizon 2020. Secondly, a clarification of the relations between Horizon 2020 and COSME, in particular with regard to activities close to the market in Horizon 2020, would be helpful to secure a coherent and efficient funding and policy for competitiveness, growth and innovation. Thirdly, and given that (higher) education and competencies are a prerequisite for both research and competitiveness, we see it as important that Horizon 2020 explores the potential synergies with the Erasmus for all programme, in particular regarding mobility and the realization of a more coordinated policy for higher education, research and innovation. Horizon 2020 should thus stimulate the inclusion of students and PhD students in research projects.

#### Proposal:

• The linkages and complementarities between Horizon 2020 and Erasmus for all, the Structural Funds and COSME should be clarified.

## The Role of National Contact Points

An important feature of FP7 and the former framework programmes is the role of the National Contact Points. Our experience is that the NCPs – being experts in their domain embedded in our national funding agency for research and innovation – have played a crucial role in informing, mobilizing and guiding researchers both from research institutions and from enterprises, and also in building links between the framework programme and the national programmes. The European network of NCPs, and the role of the Commission in training and informing them, should therefore be maintained and preferably strengthened in Horizon 2020. As Horizon 2020 has a different structure than former framework programmes with more crosscutting actions, it is important to secure an NCP system which gives the possibility to maintain strong expertise in the different domains. Other networks, such as the Enterprise Europe Network, could do more than today in mobilising enterprises, and especially SMEs, to participate in the framework programme. Such networks should however not replace the NCPs.

#### Proposal:

• The European network of NCPs should be strengthened in Horizon 2020.

# Building on COST Actions

COST, being a European framework offering a well-functioning, bottom-up oriented and open networking instrument, is important for a functioning ERA. Through its Actions, COST can offer the necessary adaptability and networking tools for any relevant initiative which needs to connect people, share knowledge and organise research. By doing so, COST facilitates participation in Horizon 2020 and other competitive programmes, facilitates access to infrastructures, creates linkages with the Structural Funds, and promotes global cooperation. In the frame of the coming budgetary discussions on Horizon 2020, and with the aim of complementing and fostering synergies with European goals, COST's first priority should be to maintain and strengthen its current activities, and then to reinforce strategic aspects as described above. Furthermore, we believe that priority should be given to finding a practical solution to the administrative challenges which COST is currently facing.

## Effects of Increased Union and National Funding

The Commission's proposal on Horizon 2020 indicates clearer financial commitments of the participating countries. It is not yet clear to which extent extra financial commitments from the participating countries will be implemented in Horizon 2020, and to what extent instruments such as JPIs, ERA-NET can expect co-funding from Union funds. Norway would welcome clarification of co-funding rates. The proposed budget of 80 billion Euros for Horizon 2020 implies a substantial increase compared to FP7. The Norwegian contribution based on a GDP-key could increase by approximately 50 % from FP7 to Horizon 2020. Norway is an active participant in the ERA endeavour, especially in Joint Programming Initiatives and many infrastructures on the ESFRI Roadmap, and would like to remain active. These ERA activities however require extensive national co-financing outside the Horizon 2020 budget. To be an attractive collaborator, we also need to invest in our national science base, and we need to take care of some national R&D priorities that the EU activities do not cover. We also believe that it is important to have sufficient time to allow the national research systems to adjust to a strengthening of cooperation at the European level. The combination of increased framework programme budgets and increased national co-funding causes concern.

## Participation by EEA EFTA States in Horizon 2020

Article 7 in the proposed Regulation establishing Horizon 2020 regulates the association of third countries to Horizon 2020. This article includes no explicit reference to the EEA Agreement. The terms and conditions regarding the participation of the EEA EFTA States, including the financial contribution, are regulated by the EEA Agreement and thus already clarified to a larger extent than the proposed legislative text on Horizon 2020 would indicate. Therefore, and as the EEA EFTA States have already conveyed to the Commission, we would like to see a more explicit reference to the EEA Agreement in Article 7 of the regulation establishing Horizon 2020. Such references are found both in existing programmes, as well as in new programme proposals including in the proposal on Erasmus for all (COM(2011) 788 final). The wording of Article 18, point 1.c of the proposed Regulation establishing Erasmus for all, stating that the programme is open to "the EFTA States that are party to the EEA Agreement, in accordance with the provisions of that Agreement", might serve as an example of how a reference to the EEA Agreement could be included in the Regulation establishing Horizon 2020.

#### Management structures

In order to achieve a better integration of national and European levels of management, it is essential that there is adequate cooperation between national authorities and the Commission, inter alia through an active and real dialogue in program committees and good access to information for national delegates and experts.

## International cooperation

Norway believes that cooperation in research and innovation with third countries is vital both for developing quality further and for securing and strengthening economic growth in Europe. We therefore appreciate that Horizon 2020, like FP7, will be open to and promote cooperation with countries outside Europe.

However, Norway has some concerns regarding the introduction of the possibility for "Europe first" requirements at work programme level. Development of knowledge is international in its nature and cooperation should therefore not be restricted to European partners. Furthermore, 'Europe first' requirements may be incompatible with international obligations that the European countries must comply with in the World Trade Organisation and other global organisations.

## Proposal:

• "Europe first" requirements should be avoided.

## Open Access

Open access to scientific publications contributes to effective dissemination and utilization of research results, and thereby increases the societal impact of research. Norway supports the willingness expressed in Horizon 2020 to promote open access as a means to communicate research results to end users, including industry, policy makers, civil society organizations, as well as the general public. Still, we believe that the proposals could be more explicit on how Horizon 2020 can contribute to the achievement of open access. This can for instance be done by expressing an intention to make open access to scientific articles funded by Horizon 2020 mandatory, if the open access pilot in FP7 and other similar actions indicate that open access mandate works effectively.

## Proposal:

• Horizon 2020 should express an intention to implement mandatory open access to scientific articles funded by the programme, if the open access pilot in FP7 turns out to be successful.