



POSITION PAPER

GREEN PAPER

From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation funding

Preamble

CNR- National Research Council of Italy shares the vision of “Europe 2020” and the actions proposed in the flagship initiative “Innovation Union for Europe” which underline the pivotal role of excellence in research to guarantee Europe a prosperous future in a sustainable manner and to support knowledge based policy decisions. The possibility to transform the today unprecedented societal, economical and industrial challenges in opportunities is strongly depending on the ability of the European Union to trigger new innovative processes. In this regard CNR considers the full implementation of ERA- European Research Area a priority and a prerequisite to build the European knowledge society. Science should be recognized as the unique source of radically new technologies able to create systems meeting the needs of people and it should be at the center stage in the Agenda. A budget ratio of 40: 40: 20 for the three pillars R&I for Society, R&I for Competitiveness, Science for R&I is considered by CNR as a proper balance.

Innovation and Grand Challenges

The attitude towards innovation is a historical characteristic of the EU and the efforts to tackle the global challenges considered in “Europe 2020” should be now carried on by a multidisciplinary coordinated approach, integrating the whole innovation chain. KET- Key Enabling Technologies have to be considered a fundamental tool for R&I development and they are essential to tackle the complexity of innovation and of the Grand Challenges. Also in the CSF- Common Strategic Framework, they should be fully supported due to their multiple and transversal applications. CNR is convinced that radical innovative processes are activated only when knowledge intensive activities are placed at the very center of the EU and of the Member States agendas, whose coordination and funding should be coherently in tune. A working system designed to place steadily one beside the other the research

and the industrial communities, since the beginning of the innovation process, is believed by CNR to be the sole practice capable of activating long term and efficient cross fertilizations between the two “cultures”. The European Commission should involve all the appropriate stakeholders (scientific community, public and private entities, civil society,...), as well as new recognized European platforms and partnerships, to define flexible strategic R&I agendas in a transparent way in order to tackle the Grand Challenges.

Pre-commercial procurement is considered by CNR an ambitious but efficient instrument to develop new generations of experimental products and services due to its capability to shorten the process “from idea to market” and to leverage further investments in a risk-benefit sharing context.

Joint Programming Initiatives and similar actions aimed at promoting partnerships among Member States are mandatory to increase the efficiency of investments, and to reduce duplications and fragmentation in pre-competitive research addressing common socio-economic and policy needs. In the process of building ERA, CNR supports JPIs to be complementary to the new CSF. The CSF should in turn strongly support actions aimed at coordinating national research programmes, at filling common large knowledge gaps and at facilitating human capacity building, also by strengthening the Marie Curie Actions. Moreover, the CSF should reinforce recommendations to Member States to exploit Structural Funds also to increase their research infrastructures and to make their technological districts more competitive.

Research and Infrastructure

Public Research must have a central role in the innovation process, which is broader than the mere technological one (including design, new combination of existing technologies, service and social innovation), and can support it through the whole “from idea to market” cycle, including its demonstration phase. The CSF has to adopt different and coordinated tools to suit the characteristics of the various phases. It should also effectively and efficiently promote knowledge transfer to boost the innovative process into SMEs and the socio-economical growth. To improve the competitiveness of future European products and services, the EU policy should also create better access conditions to R&I instruments for SMEs in need of innovation and provide efficient bridging between research and industries. In this context, CNR considers crucial to facilitate the scientific community and industries to cooperate and provide them with the opportunity to flexibly find the best and appropriate answers aimed at addressing innovation. The promotion of more intense cross-communication between science and industry can be obtained also by increasing the accessibility (and e-accessibility) of industries to large European Research facilities. Furthermore, the importance of scientific research should be more widely promoted so as to be

perceived by civil society as a value and as a driving force to guarantee progress and sustainable development.

Resources

The CSF has to supply adequate funds to support innovation, guaranteeing transparent, measurable and coherent research contents. Simplified procedures to make R&I programmes more attractive and participated is a clear request coming from SMEs and research institutions, as CNR. Since cooperative behavior is more effective within smaller targeted projects, CNR suggests that larger projects should be carefully structured and funded as clusters of smaller teams. Funding instruments should be therefore tailored towards the characteristics of public and private beneficiaries. CNR strongly encourages funding schemes to be streamlined, well targeted to clear objectives and aligned to maximize the effect of EU investments in R&I.

CNR addresses open access as a fundamental tool to facilitate a new, coordinated global approach to data and information that ensures equitable access to quality data and information for research, education and informed decision making. Consequently, the CSF should address all the policy, legal, and technological problems which hinder the realization of “Open Science”.

International Cooperation

The CSF should consider International Cooperation as a way to make the innovation process participated in the global scenario, with special attention to the strategic relevance addressed by Member States (Mediterranean and Black Sea basins, Arctic regions, Africa,...). CNR supports the establishment of a common framework to facilitate cooperation with non-EU Countries, promoting their involvement especially in strategic issues dealing with global challenges. The cooperation should always result in an added value for Europe.

Sources of knowledge

Facing Grand Challenges and promoting innovation involve the understanding of complex and highly non-linear systems. CNR considers curiosity-driven research and the contribution of foresight activities to be fundamental to find sustainable long term solutions. For these reasons CNR fully supports the original role and mission of ERC - European Research Council, that is, to attract, retain and recruit world class scientists in ERA, with the aim to advance Europe's scientific performance at the

highest levels of excellence . Given the “no-juste retour” criterion, full transparency and the benefit for European Union should be the main principles inspiring the activities of ERC.

CNR also suggests to pay more attention to research in social sciences and humanities, not only “per se” but also for their transversal role in providing adequate instruments for understanding social vulnerabilities, influencing innovation and enhancing the attractiveness of science in civil society.

Removing Barriers

As an important goal, the CSF must recognize the role played by women in R&I, by promoting equal opportunities and facilitating the removal of cultural barriers which also prevent their access to leading positions. Measures allowing to balance private and professional life should be made available, with particular emphasis on the early stages of the career.

In order to contribute to the full realization of ERA, the CSF must be supported by a coherent set of laws at EU and Member States levels also to solve the issues related to cooperation between research and industry in the innovation process (IPR, long term mobility, ...). The removal of regulatory barriers, including those which still prevent public and private entities to access EU R&I schemes (double assessment of projects, common pot, appropriate overheads, interest bearing accounts, tax policies...), should be considered as one of the main actions to be pursued. Similar commitments should be devoted to the harmonization of Member States legislations related to the mobility of researchers and research funds, with particular attention to social security and pension schemes, career development, mid-term secondment and opening of national grant schemes.

Conclusions

The CSF should be structured in an innovative manner, suitable to pursue the ambitious long-term visions set by “Europe 2020”. Only a truly new instrument, propelled by ideas and focused on cross-fertilization between research and industry can contribute to reassign Europe with a leading role in the global scenario. European citizens, as well as all those who wish for human society founded on knowledge, must find in CSF and in its results a strong impulse to grow and to have a prosperous life. CNR will be proactive in taking a leading role in the CSF initiatives and in contributing to the innovation in and for Europe.

Summary of the main issues

- Research must play a central role in the Innovation process and in tackling Grand Challenges. A budget ratio of 40: 40: 20 for the three pillars R&I for Society, R&I for Competitiveness, Science for R&I is considered as a proper balance.
- Multidisciplinary approaches, KET- Key Enabling Technologies and public-private partnerships during the whole innovation cycle must be promoted.
- Curiosity-driven research and mobility are fundamental to build ERA. CNR fully supports the original role and mission of ERC - European Research Council. Full transparency and the primacy of European Union's interest should be ensured.
- Easy access to research infrastructures must be facilitated also as a source of technology transfer from research to SMEs.
- JPIs and CSF must be complementary and in tune. The CSF should strongly support actions aimed at coordinating national research programmes, at filling common large knowledge gaps and at facilitating human capacity building.
- Open access to data and results is mandatory for "Open Science" .
- Pre-commercial procurement is an ambitious but efficient instrument to develop new generations of experimental products and services.
- Facilitating cooperation between the scientific community and industries is crucial, also providing them with the opportunity to flexibly find the best and appropriate answers aimed at addressing innovation.
- Simplified procedures, fitting the characteristics of public and private beneficiaries, are requested.
- Research in social sciences and humanities must be sustained in order to understand major trends in society and to perform comprehensive foresight activities.
- The role of women in R&I must be recognized, also removing cultural barriers preventing their access to leading positions.