

This paper represents the position of the Coordination Action QUIE²T (Quantum Information and Entanglement Enabled Technologies) with respect to the Green Paper of the European Commission in preparation of the Common Strategic Framework for EU Research and Innovation Funding COM (2011) 48. As such, it is submitted on behalf of the European Quantum Information Processing and Communication community and is backed up by the more than 200 groups working in this research field.

1. Fundamental (physics) research is a long term investment in innovation

Basic and purely curiosity-driven research funding needs to be strengthened. This type of research might not lead to short-term applications; indeed its applications might not be even predictable. However it has led in the long term to countless discoveries (e.g., the laser, nuclear magnetic resonance, etc.) that turned out into unexpected applications for the benefit of the whole society (and not rarely won to the discoverers a Nobel Prize). This is a crucial long term investment for the future generations; it is about carrying out the essential "R" part of a well thought R&D strategic plan, and the only way to enhance, creativity and innovation in Sciences, cascading afterwards all the way down to the "D" part where alignment with users' requirements is possible as is the identification of the short-term socioeconomic impact.

2. "High-risk high-payoff" research should be strengthened

The pioneering research funded by Commission units such as the Future and Emerging Technologies (FET) Proactive and Open units should be strengthened. At the same time an excessive focus on specific directions such as the one occurring in the so-called Flagship Initiatives at the expense of the research breadth ensured by the two aforementioned units has to be avoided. FET Proactive and Open units should represent a top priority in the next Framework Programme.

3. Continuation of collaborative research instruments is essential

Connected to the previous point, there is a strong need to preserve in the next Framework Programme the instruments for collaborative research -- Integrating Projects, Special Targeted Research Projects, Coordination and Support Actions, ERA-NETs, ERANET + -- that have worked so well in previous FPs not only in terms of the excellent scientific results produced but also (and maybe most importantly) in building truly European scientific communities and research areas. Coordination Actions will be also crucial for conveying to the general public that research fields producing world-class results is a cultural value in itself.

4. Simplification of EU funding is required

QUIE²T strongly supports any type of measure aimed at simplifying the administration of EU supported activities.

