



DLR Position Paper

On a

European Innovation Council

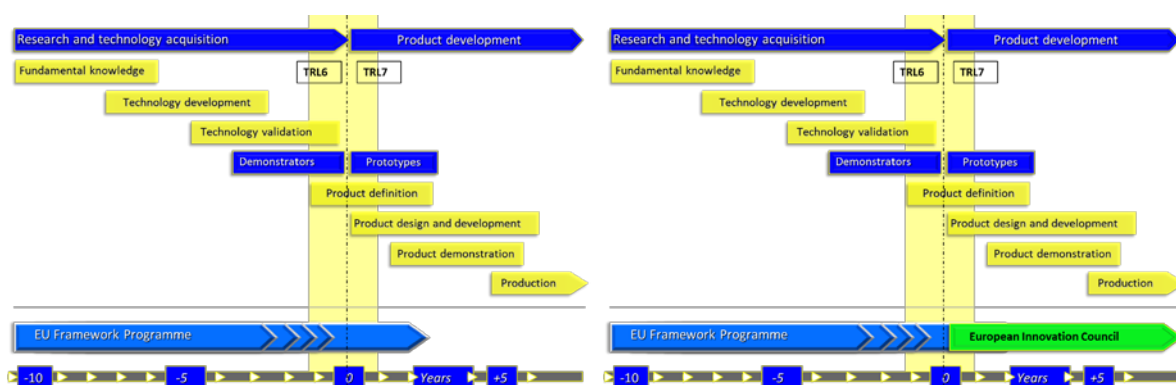


Need to invest in research and innovation while covering the entire research and innovation chain

Because of lacking natural resources the only way for Europe to maintain its worldwide leading position in the global competition is to ensure a continuous flow of novel ideas and innovative products. These will also help to address the grand societal challenges like sustainable energy supply, sustainable transport and climate change.

Except in ICT most sectors - in particular aviation, transport, and energy - have experienced long lasting research and development chains as well as long product cycles. To ensure innovation in these sectors the entire research and innovation line needs to be well covered along the entire TRL line from 1 to 9. This starts from novel ideas that emanate from basic research and continue via technology development, technology validation, system demonstration up to the final development of an innovative product, which can be sold successfully on the market.

On European scale the steps from basic research (TRL1) up to system demonstration (TRL6) are covered appropriately by ERC, RT&D collaborative research and the system demonstration in Joint Technology Initiatives like Clean Sky, SESAR, Shift²Rail, and FCH-JTI. However, similar as on national level on European scale there are only a few instruments to cover the so called “valley of death”, in which companies will have to deploy the demonstrated technologies into the final successful product. A European Innovation Council could be the right instrument to support industry and enterprises on higher TRLs from 7 to 9.



EIC as complementary instrument on European scale

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As start-ups, spin-offs and so called unicorns need to make fast progress, processes for a faster and simplified financing of innovations can be made available via the EIC. It could offer grants and loans for seed investments and spin-offs, keeping in mind that it targets close-to-market research where a high probability of a return on investment within 2 to 5 years is given.

Companies, especially start-ups and SMEs, face difficulties to learn about and understand the funding mechanisms. To address this, the EIC should act as focal point, providing all relevant information and be recognized as the main organization dealing with innovation in this segment of the innovation chain. In case of coexistence with other bodies, like the European Institute of Innovation and Technology (EIT), respective roles should be clearly defined, thus to avoid overlapping and confusion. Furthermore, simple and lean processes for application, eligibility conditions, technical and cost reporting should be established. Efforts should be focused on technical progress rather than burdensome administrative procedures.

The EIC should set a specific, effective and clear governance structure, incorporating all stakeholders in its decision process and giving the possibility to ensure that the EIC orientation meets the expectations of RT&D organisation and private stakeholders'.

Existing instruments, which are currently fragmented into several funding mechanisms, e.g. SME instrument, COSME, Fast-Track-to-Innovation, should be merged into a single instance that is clearly separated from the RT&D collaborative research. Synergies with the structural funds or the European Fund for Strategic Investments could be highlighted with a precise procedure and guidelines on ways to take advantage of those synergies effectively.

To prevent establishing silo structures for industry, research organizations and universities, the EIC, in addition to the efficient and approved Framework Programmes' collaborative research instruments, should also provide funding for collaborative research carried out by industry and academia to build and strengthen innovation ecosystems.

As universities and public research organisations are not entitled to fund research via loans, industry could be encouraged with higher funding rates in case universities and research organisations are subcontracted for research and the use of research and test infrastructures by industry for EIC projects as used in some national programmes like in Austria and Germany.

The European Innovation Council does not diminish the need for funding collaborative research carried out by Industries, SMEs, research organisations and universities.

As the whole research and innovation chain need to be funded in the years to come, the European Research Council (ERC), the European Innovation Council and the European Investment Bank (EIB) should not be the only pillars for funding and financing in Horizon 2020 or future framework programmes. In order to avoid silo structures between the various research and innovation stakeholders the successful collaborative research instruments, which fostered strong cooperation between universities, research organisation, SMEs and industry, ensuring effective knowledge and technology transfer between the stakeholders and finally successful innovation need to be maintained and strengthened. In the same way ERC as well as EIC, as an additional support instrument, should allow access and support to all research stakeholders. A successful European innovation system has to cover the entire research and innovation chain.

In a similar way a set of appropriate instruments (small and medium sized collaborative research projects to develop new technologies and large collaborative projects/programmes for system demonstration) are needed to push forward excellent ideas and generate research results in order to build the sound technology basis for a competitive European industry. This means that funding for fundamental research should not be relegated only to the European Research Council, but should be actively supported throughout other programme areas of Horizon 2020 as well as future framework programmes, in order to guarantee the continuity of collaborative research in all thematic areas and throughout the entire innovation chain.

Conclusion

Consequently, the EC's idea is supported to complement the existing European funding instruments ERC, collaborative research, JTI/PPPs with an European Innovation Council as a one-stop shop for innovators starting with a Technology Readiness Level of 7 or higher.

It is crucial that this additional instrument flanks existing instruments and does not weaken them by reducing their resources. The entire research and innovation chain must be covered by European support to ensure in the long run a continuous development of new innovative products and processes, hence creating growth and jobs in Europe.

DLR at a glance

DLR is the national aeronautics and space research centre of the Federal Republic of Germany. Its extensive research and development work in aeronautics, space, energy, transport and security is integrated into national and international cooperative ventures. In addition to its own research, as Germany's space agency, DLR has been given responsibility by the federal government for the planning and implementation of the German space programme. DLR is also the umbrella organisation for the nation's largest project management agency.

DLR has approximately 8000 employees at 16 locations in Germany: Cologne (headquarters), Augsburg, Berlin, Bonn, Braunschweig, Bremen, Goettingen, Hamburg, Juelich, Lampoldshausen, Neustrelitz, Oberpfaffenhofen, Stade, Stuttgart, Trauen, and Weilheim. DLR also has offices in Brussels, Paris, Tokyo and Washington D.C.

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