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Tekes views on the main challenges and elements of the next Framework Programme for Research and **Innovation**

European added value and impact for the European economy and society

When planning the next EU Research Framework Programme, an important funding and networking structure for European STI-activities, the two most important features are European added value and impact for the European economy and society. All the Framework Programme activities should bring added value to the work done in Member States and among the Member States according to several bilateral and other agreements taking place. As the Framework Programme uses a considerable amount of public money, the return on investment should be more tangible than so far. This requires strong cooperation between public and private sectors as well as better monitoring of business and social innovation generated by the Framework Programme.

The next Framework Programme for Research and Innovation plays an important role in the Innovation Union Flagship initiative. The Framework Programme can be the beacon in this work and act as an example for the Member States who should develop their own strategic planning and consider the end-users' needs as starting point for research and innovation.

In order to meet the challenges of the Europe 2020 strategy, major structural reforms for the Framework Programme are needed. The Framework Programme should expand from the traditional science, technology and innovation funding structure to form an entity including also new areas as innovation friendly regulation, taxation, standardization, innovative public procurement, education and skills development. Certain forms of non-technological innovation, like service innovations, should also be prominent in future research and innovation funding programmes. In addition, joint efforts and better synergy with member states' STIprogrammes are needed to make Europe stronger and less fragmented. The relationship and complementarities of the joint programming process and European Innovation Partnerships should be carefully thought out.

Continuity and flexibility – both needed

New structures for the Framework Programme are needed, but continuity is also essential, especially for industrial and other partners who do not have as efficient FP support structures as RTD partners do. Creating totally new rules and principles are against the basic principles of simplification. Collaborative research (cooperation area in FP7) as the core element as well as frontier research (ERC), SME measures, transnational and intersectoral mobility and international cooperation are well known to participants and should be maintained. The Framework Programme should however encourage pioneering STI-activities in Europe. Therefore there should be ample possibilities for piloting new approaches in each part of the Framework Programme. These pilots could serve as benchmarks for best practises for other members states.



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ERA policies serving Framework Programme objectives

In order to fulfil the aims of the European Research Area **including innovation**, Member States must work together more efficiently. A close dialogue between Member States and the Commission will help increase **complementarities and division of tasks** between national programmes and European activities. ERA policies should serve the Framework Programme and grand challenges more visibly especially through relevant **exploitation instruments and links to business innovation** mentioned before.

The new concept of **Joint Programming** based on variable geometry can be used when some Member States are ready to act more rapidly and combine forces. Joint Programming also suits the situation where participating countries see that they have common needs. As to the realization of Joint Programming, the executive agency's role also has to be evaluated. Besides project co-operation also research could and should be among core activities in the Joint Programming Initiatives.

Simple and predictable administration

Project administration must be simple and effective and the application procedure easier and quicker. The actions proposed in the recently published Communication on Simplification will address many of the current problems. However, the key issue is the **uniform and predictable interpretation and application of these rules** by the Commission DGs and Project Officers. The beneficiaries must be able to trust that the rules remain the same throughout the programme period without reinterpretations.

New instruments should not be introduced in the next FP as the current portfolio is more than sufficient. In fact, the number of instruments could be reduced and should be applied consistently in different programmes in different DGs. European co-operation also needs systematic and **professional IPR knowledge**.

The priorities of the EU budget must be in the future i.e. in research, development and innovation and concentrate on demand-side activities. Structural funds should be used only for Cohesion countries and rich European countries should fund the corresponding activities nationally taking into consideration the national over-all pictures.

Top down and bottom up

A. Relevance based

The Grand Challenges

The grand challenges Europe is facing are complex and global by nature. The general mind-setting in Europe has to change from national inward-looking into trans-national collaboration. The challenges can only be successfully addressed if the approach is based on a well developed strategy and the **full innovation value networks**. Grand challenges can also be grand opportunities for European businesses.

In the structure of the Framework Programme grand challenges is a policy level element which needs actions by policy makers. Continuous dialogue on the Grand Challenges is needed with all stakeholders: Member States, the European Commission and the European Parliament. The challenges change during the FP lifespan wherefore the set of challenges and the solutions must be flexible.



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Challenges must turn into sustainable solutions in areas such as global warming, tightening supplies of energy, water and food, ageing societies, public health and security. Approaching these challenges requires joint efforts and investments by both public and private sectors together with policy measures which include

- regulation, taxation, public procurement, standards and education, service systems
- demand-side instruments and user-driven approach, piloting and best practices
- new concepts using variable geometry like Joint Programming

From thematic programmes to funding for complete value networks

The collaborative projects under the thematic programmes form the core of the Framework Programme. This should be maintained. The thematic programmes, or rather the themes, should originate from the problems to be solved under the chosen grand challenges having **social challenges and market growth as starting points**. As there will be different approaches to the solutions only the general outlines of the themes should be described. The challenges will vary during the lifespan of the Framework Programme wherefore the themes should be flexible both content and budget wise. The features of the collaborative research should include

- Core: solutions for Grand Challenges, target group research community (industry + academia)
- The projects under the themes form an entity, not a group of separate projects
- New innovation patterns (service innovation, open innovation, user-driven innovation, living labs etc) and pilot projects largely exploited
- Funding for projects aiming at complete value networks, modular approach
- Industry relevant infrastructures
- Also bottom-up projects or SBIR-projects

Use of results

Measures are needed to maximize the economic and societal impact of new knowledge. The success of the FP lies on its capability to produce **systemic innovations**, **new jobs and to strengthen the social welfare**. We don't see that the CIP Programme answers to these demands and suggest that new concepts, covering the entire framework programme must be developed for the utilization of the results born in the FP. The choices for project partners and results users could be

- Funding criteria to include the aim for the complete value network in a collaborative project
- Extra funding for successful exploitation plan
- Open innovation requires confidentiality agreements; innovation friendly environment and change of attitude from "not invented here" to "proudly found elsewhere" also outside Europe
- The project to be composed of several modules. This would enable e.g. SMEs embark in a project also towards its end in order to exploit the results anticipated in the exploitation plan.
- Platform for results originating from the entire FP and which original project partners will not make use of for the utilization e.g. by venture capital
- Implementation of the Lead Market Initiative to enhance market pull for the results of the FP.



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B. Excellence based

The funding by European Research Council is aimed to support the best scientific efforts in Europe across all fields of science, scholarship and engineering. ERC promotes investigator-driven, or 'bottom-up' frontier research. By doing so it can also raise the status and visibility of European frontier research and the very best researchers of today and tomorrow. Together with research based infrastructures it can make Europe more attractive to the first class researchers both from other parts of the world and to European researchers to work in Europe.

The results born in ERC projects should also be better utilized and therefore they should be available on the platform described above.

C. MAIN ELEMENTS OF THE NEXT FP

TOP DOWN BOTTOM UP

ADDRESSING GRAND CHALLENGES

- Policy level: positioning FP with other European and national instruments
- Measures: regulation, taxation, standards, education, public procurements, demand side instruments and user-driven approach, piloting and best practices
- Joint programming

ERC Excellence only selection criteria

THEMATIC STI COLLABORATION: FUNDING FOR COMPLETE VALUE NETWORKS

- Primary selection criteria: relevance. Industry + Research Community working jointly in projects with European Added Value and Impact. Funding for projects that form complete value networks
- Themes flexible (content and budget wise)
- Modular projects

Mobility

SMES (participation target, both top-down as well as bottom-up approach needed)

USE OF RESULTS

"New CIP" for all FP8 (demonstration, market replication, verifications) + Open access and usability for those results that the original project partners will not make use of