Research and technological development: setting up the ENIAC Joint Undertaking, nanoelectronics

2007/0122(CNS) - 27/11/2013 - Follow-up document

This report highlights the findings and recommendations of the panel of independent experts who conducted the second interim evaluation of the ARTEMIS (Embedded Computing Systems) and **ENIAC** (Nanoelectronics) Joint Technology Initiatives (JTIs).

The JTIs were introduced in the Seventh Framework Programme (FP7) to support key areas of research and technological development of importance to Europe's competitiveness. The ARTEMIS and ENIAC JUs were launched in February 2008.

Since their establishment, the ARTEMIS and ENIAC JUs launched and evaluated, respectively, six (one per year) and nine calls for proposals (one in each of 2008, 2009 & 2010 and two in each of 2011, 2012 and 2013). By the end of 2012, **102 projects** had been funded by the ARTEMIS and ENIAC JUs. The EU and JTI Member States together have so far committed over **EUR 1.115 billion to both JTIs combined** (2008-2012), in addition to private R&D efforts worth more than EUR 1.670 billion.

The second interim evaluation report confirms the **high value and significant achievements of the ARTEMIS and ENIAC JUs**. In particular, the panel concludes that (i) the relevance of the JUs remains high, and considerable progress has been made to achieving their objectives; (ii) the effectiveness is high; (iii) the efficiency is good despite the rather heavy regulatory, administrative and financial burden; and (iv) the quality of reviewing, reporting and monitoring of projects as done by the JU is high.

In the ENIAC case, the 50 projects to date represent a total R&D investment of EUR 1.795 billion, comprising of EUR 382 million national contributions, EUR 283 million EU contribution and EUR 1.130 million industry contribution. The projects cover all eight work areas of the ENIAC Strategic Research Agenda in the fields of automotive/transport, communications/lifestyle, energy, health, safety/security, semiconductor design, semiconductor manufacturing and the underlying equipment/materials.

Since 2011, the ENIAC JU became an **important vehicle for the implementation of manufacturing pilot lines**. This created a steep increase in the joint investments by the stakeholders, bringing the execution of the programme close to budget that was foreseen.

In operational terms, the ENIAC JU is **on track to bring it close to the original ambition for the initiative**, i.e. to leverage an industrial investment programme in nanoelectronics R&D of some EUR 2.7 billion. The Commission is confident that both initiatives will have delivered on their promises by the end of their mandate in 2017.

Recommendations for the Industrial Associations: the report states that the call for manufacturing pilot lines by the ENIAC JU in 2012 has been very successful. This call is the first large-scale implementation of the recommendations from the High-Level Group on Key Enabling Technologies (KETs).

In the area of nanoelectronics, CATRENE and ENIAC developed a common Vision, Mission and Strategy document for R&D in micro and nanoelectronics in Europe.

With the new ECSEL JU, the industrial partners should take the opportunity of a **more coordinated and proactive approach** to reinforce the strategic dimension of their cooperation.

To this effect, the proposal of the Council Regulation on ECSEL includes a requirement for broader stakeholder engagement.

These actions will contribute to the development of an **overarching EU research, development and innovation strategy covering nanoelectronics, embedded computing and cyber-physical systems**.

Recommendations for the Joint Undertakings: in accordance with the recommendations of the panel of experts, the Commission will ask the Executive Directors to examine the possibility to implement them and ensure a proper **reporting** on exploitation activities, though limiting the burden on the beneficiaries. The **development of an appropriate metrics** for measuring the impact and success of JU projects is equally important.

The Commission will continue to raise this issue in the Governing Boards in view of achieving a reasonable assurance that the financial transactions of the JUs are correct.

Recommendations for the European Commission: the recommendations relating to the next generation JTI have been taken into account in the Commission's proposal for a Council Regulation on the ECSEL Joint Undertaking. This concerns in particular the recommendation to: (i) have a single JTI with a single integrated research and innovation agenda; (ii) provide simplified financial regulation measures and an increased strategic role for its Governing Board; (iii) incorporate a further harmonisation of rules in accordance with the Rules for Participation of HORIZON 2020.

The new ECSEL JU should **focus on innovation and covering higher Technology Readiness Level (TRL)**.

Recommendations for the Member States: Member State participation rules, funding rates and procedures should be harmonised and synchronised wherever possible, adopting best practice as the guiding principle. They should commit to a multi-annual funding system.

The final evaluation of the ARTEMIS and ENIAC JUs is scheduled for **2017** as part of the interim evaluation foreseen for the ECSEL JU.