Establishment of the "ARTEMIS Joint Undertaking" to implement a Joint Technology Initiative in Embedded Computing Systems

2007/0088(CNS) - 27/11/2013

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.

The 52 ARTEMIS projects to date represent a total R&D investment of EUR 990 million, comprising of EUR 288 million national contributions, EUR 163 million EU contribution and EUR 539 million industry contribution. Those projects address all eight Sub-Programmes of the ARTEMIS Strategic Research Agenda in the areas of safety, healthcare, smart environments, manufacturing, computing, security, sustainability and embedded systems design.

After a relative low commitment by ARTEMIS member States in the first four years, the introduction of the ARTEMIS Innovation Pilot Projects in 2012 gave a boost to the JU activities resulting from higher commitments by Member States.

In operational terms, the ARTEMIS JU will be **further away from the initial target of EUR 2.5 billion** in R&D for embedded computing systems. However, the developments of the last two years indicate also for ARTEMIS a significant increase of its volume of activities. 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 notes that the ARTEMIS Innovation Pilot Projects are indeed 'a laudable intent of sustaining innovation from proof of concept and prototyping stage right through to a solid industrial platform'.

Furthermore, the good work done within ARTEMIS-IA on the portfolio analysis and key performance indicators is acknowledged. Both industrial associations together with the JUs will be encouraged to continue working in this direction.

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.