

FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V.

# **A SEPARATE DEFENSE RESEARCH PROGRAMME**

## ADDITIONAL RESSOURCES AND OWN RULES

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## **Establish a separate defence research programme with additional resources and own rules**

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Europe faces increasing threats of its security and a dramatic change of the strategic global environment. This is accompanied by an essential deficit in investments in defense and security. Conflict has moved to the doorstep of the European Union and terrorism has become a present threat in all European countries. At the same time, Europe faces more and more cyber and hybrid threats that are difficult to tackle with conventional means. The European Commission and the member states set ambitious political goals in their Global Strategy for Foreign and Security Policy; they want to act as a security provider in the international environment and strive for strategic autonomy. To achieve these goals, a robust defense research and technology base is a condition sine qua non.

Over the last decade, a strong decline of defense research spending can be noted in Europe. Between 2006 and 2013, the member states of the European Defence Agency decreased their defense R&D budget by almost 30% on average.<sup>1</sup> Investments in collaborative European defense R&D decreased even more. In reaction to the financial crisis, the member states pulled out of collaborative European defense R&D projects and cut back their own national spending. A bottom line is now reached where it is time to realize that pooling resources in areas of strategic importance for Europe is crucial.

Defense research aims at giving a decisive operational advantage to the forces. In history, disruptive technologies have played a crucial role in many conflicts. Besides, there are many examples of commercial successes which originate from defense research, such as the internet or the microwave. However, Europe lost its abilities to develop these critical technologies. Today, the capability development of the member states remains uncoordinated. In case of conflict, the forces have difficulties to share equipment or to even talk to each other in a secure way. Further, the cuts of defense spending throughout Europe have led to a struggling defense industry. Europe has become dependent on the United States and other partner countries to guarantee the security of its citizens. Europe seems to have lost its technological sovereignty. Defence related research and innovation at the European Union level is needed to develop critical technologies and to regain this sovereignty. Research will support the modernisation and independence of Europe's manufacturers.

Today, there is an extreme concentration of European defense research. France, the United Kingdom and Germany represent the vast majority of defense R&D spending (approximately 90% of all spending in 2013).<sup>1</sup> This divides the member states into two groups: 1) the defense consumers group with little or no defense research at all and few industries and, 2) the defense producers group which are striving to conduct at least some product development. This leads to very different interests and – especially having in mind that defense research is closely linked to public procurement, a mainly national competence.

Europe will need to find a way to identify common and balanced defense research priorities, both on higher technology-readiness-levels (TRL) focusing on identified military capability needs as well as on lower TRLs focusing on emerging and potentially

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<sup>1</sup> Frédéric Mauro, Klaus Thoma , [The future of EU defence research](#), Brussels: European Parliament (2016)

disruptive technologies impacting future military capabilities. Moreover, flexible modes of collaboration have to be found.

Highly sensitive defense research requires special framework conditions, confidentiality and higher funding rates than regular research projects. It also requires deviations from the general rules and the governance applied for instance in Horizon 2020. Results from defense research are not meant to be published open access. The defense research programme needs to be separate from the upcoming 9th framework programme for research and innovation: with its own rules, its own budget and full cost funding. New contracting rules are tested right now under the Preparatory Action on Defence Research and should provide a good basis for the future programme. As stated by President Juncker in his state of the Union Speech in September 2016, collaborative defense research should be funded in a so-called "Research Window", leading to a dedicated European Defence Research Programme in the post-2020 multiannual financial framework.

Fraunhofer thinks that the Group of Personalities<sup>1</sup> recommended a very sensible way forward to get to the right structures and procedures for this future programme. The European Defence Agency has started with a pilot project last year and the European Commission launched the already mentioned Preparatory Action on Defence Research. This needs to be a step-by-step and learning-by-doing procedure. Like this, all stakeholders can take their time to solve challenges so that they can get ready to start a full-fledge EU-funded defence research programme by 2020.

Fraunhofer also supports the plans to start small and to increase to a full programme by 2020. However, one has to be careful that the introduction of an EU-funded defence research programme does not lead to a cannibalization effect of the European research budget. The European Union and its member states need to see the importance of both - European defence research as well as collaborative research under the 9th framework programme for research and innovation – and will have to make additional funding available.

In conclusion, Fraunhofer encourages the European institutions to establish a separate EU-funded defense research programme; it should be complementary to national defence R&D activities and budgets to ensure the expected leverage effect of such a programme on strengthening the European technological and industrial defence base – including academia, research and technology organizations, small and medium-sized enterprises and industry. This will be essential to deal with the anticipated security challenges of the 21st century.

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<sup>1</sup> Group of Personalities on the Preparatory Action for CSDP-related research, European Defence Research - The case for an EU-funded defence R&T programme, Paris: European Union Institute for Security Studies (2016)