

EDA and EC meet in match-making event dedicated to Advanced Materials

The European Defence Agency met on Tuesday 7 November 2017 the European Commission at the “Champs de Mars” building in a matchmaking event dedicated to Advanced Materials. In particular, the EDA Unit Innovative Research and the DG RTD Unit D3 shared information concerning the most advanced research in the field of advanced materials, exploited in both sectors, defence and civilian. The dual use approach was stimulated already in the European Council of Defence Ministers of December 2013, with the invitation “to invest in cooperative research programmes” and “to maximise synergies between national and EU research”. The event was fully successful, gathering more than 60 experts from Industry, Academia and Institutions involved in both sectors. The panels agreed that there is an evident *entanglement* between the defence and the civilian sectors for many technologies and that there is a great synergy, despite the two sectors could appear very far away from each other. More efforts will be done in the near future to foster such a collaboration. The event was very useful for the industry and academia involved, because time was dedicated to the *speakers corners*, where the speakers could answer directly to the audience in separate sessions.

The European Council of Defence Ministers in December 2013 invited the Member States to increase the investment in cooperative research programmes and to maximise synergies between national and EU research. This led in the recent years to an evident increase of the so-called dual-use technologies: additive manufacturing, gallium nitride, graphene, just to mention some of them.

A nice metaphor to introduce the connection and exploitable synergies between the defence and civil applications of the same technology is the quantum *entanglement phenomenon*. As mentioned by Denis Roger, the Director of the European Synergies and Innovation Directorate at EDA, “*indeed, the dual-use is characterised by the application of the same technology in the defence and civil requirements (the quantum states) and there is a great synergy between these two areas, even though it could seem that they are very far away from each other*”.

Since its inception, the European Defence Agency was involved in preparing the future capabilities in the defence research, through the cooperation among the Member States in 12 Capability Technology Groups. One of these CapTechs focuses on the research on advanced materials and structures, where several projects have been funded and presented during the event.

The meeting made evident how distinguished actors have developed similar technologies with active defence and civil requirements. The following fields have been covered in different sessions:

- lightweight and fibre-based materials and structures
- nano-coatings for protection of materials
- damage propagation and control: simulation, joining, bonding and welding

Speakers corners have been created at the end of each session, so that more than 60 participants from Industry, Academia and RTO could raise questions and exchange ideas.

The main outcome of the event is to continue and enhance the collaboration of EDA with the European Commission in the entanglement (dual use) between defence and civil applications of the same technology, as well as to increase the interest towards the EDA CapTechs, as *agora* where

disruptive research ideas in the defence research will be developed in a cooperative approach among the EDA Member States.

Background

This event follows a previous meeting co-organised in June 2016 by EDA and DG CONNECT on the dual technologies in the specific areas of electronic components. The conclusions of that meeting show that there is more and more need of enhancing spin-in/spin-off phenomena in the advanced technologies, such as the electronic components. This is also the case for advanced materials.

Further information on dual use/entanglement of advanced technologies

- Web news, Workshop on dual use technologies – components, 28 June 2016 (<https://eda.europa.eu/info-hub/press-centre/latest-news/2016/06/14/eda-ec-and-ecsel-ju-organise-first-joint-workshop-on-dual-use-technologies>)
- European Council of Defence Ministers, December 2013 (<https://www.eda.europa.eu/info-hub/opinion/2013/12/20/defence-the-european-council-matters>)
- EDA assists dual use projects to access funding (<https://eda.europa.eu/info-hub/press-centre/latest-news/2013/12/18/eda-assists-dual-use-projects-to-access-funding>)
- EDA Facts sheet (https://issuu.com/europeandefenceagency/docs/2013-12-12_factsheet_esf_high)