

Strengthen dual-use technologies by enhancing EU defence funding

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CESAER – the strong and united voice of universities of science & technology in Europe – welcome the European Commission’s [proposals](#) for enhancing research security and dual-use technology development. We appreciate the proposal’s potential to address the new geopolitical situation through research and innovation, and see its strength as an enabling tool for advancing research integrity.

The changing geopolitical landscape and the intertwining of geopolitical considerations with cutting-edge science & technology policies presents increased risks, especially for dual-use technologies. Universities of science & technology, being at the forefront of research, education and innovation activities related to science & technology, are key players in this area.

Universities of science & technology operate in multiple dimensions: conducting excellent science, developing advanced technologies, providing education at the highest level, and fostering ethical behaviour. Cutting-edge science & technology play pivotal roles in enhancing societal protection and military defence. The influence of science & technology in promoting peace and security is significant, and they provide an impetus for advancements in these areas. Therefore, we highlight that universities of science & technology contribute in one or several of the dimensions in which they operate to defend peace and the rule of international law.

For universities of science & technology to effectively assume their societal roles and responsibilities, it must fall within their institutional autonomy, and the academic freedom of their community, to decide the how, when and where for such contributions. Within that framework, some universities of science & technology chose to engage with research, innovation and education in relation to enhancing defence capabilities, directly or indirectly. At the same time, some universities of science & technology chose to engage exclusively in the civilian context, including through self-governance mechanisms such as a [‘civil clause’](#).

In response to the [white paper](#) ‘On options for enhancing support for research and development involving technologies with dual-use potential’, we emphasise the need for Horizon Europe and its successor to continue supporting cutting-edge science & technology, and outline an enhanced role of the European Defence Fund.

1) Ensure Horizon Europe and its successor continue to excel in advancing research and innovation excellence

Numerous CESAER Member universities across Europe have extensive experience of combining excellence in research, education, and innovation with direct involvement in defence-related research and education. This is achieved through specific and separate procedures for defence-related activities, including security and screening measures implemented throughout the entire research and education process. These measures are

often executed through (quasi) institutes that are 'fenced off' (physically or digitally, or both) within or off campus. Experience shows that the area 'inside the fence' operates fundamentally differently from regular operations to meet legal requirements specific to sensitive activities and to ensure a clear separation. This separation is necessary because the excellence in research, education, and innovation for universities of science & technology is underpinned by the ability to recruit and work with the best talent across Europe and beyond, and the timely access to and dissemination of the latest scientific knowledge. These excellence drivers are, by design, severely restricted in defence-related settings. By establishing a suitable separation, universities that choose to engage in defence-related activities can do so while also delivering excellence in research, education, and innovation.

In April 2022, we [emphasised](#) that the civilian focus on Horizon Europe should be maintained. We stress that the EU framework programme for research & innovation is a crucial instrument that excels in supporting cutting-edge science, technology, and talent. Horizon Europe achieves its significant positive impact through its focus on the free circulation of researchers, scientific knowledge, and technology; the development, promotion, and advancement of scientific excellence; and the fostering of innovation and facilitation of technological development. To ensure Horizon Europe and its successor (FP10) can continue to excel in supporting cutting-edge science & technology, we must ensure that its drivers of excellence and impact are not jeopardised.

The [white paper](#) introduces dual-use technologies in the context of bridging the gap between civilian and defence-related research. From a research perspective, the distinction between dual-use and non-dual-use technologies can be unclear and may seem artificial, particularly for many critical and emerging technologies. This underlines a need to provide additional resources and involve the relevant research community in making distinctions, where needed. A focus on the intended end-use of a research & innovation activity can also be useful. The reason is that eliminating the distinction between civilian and defence-related research funding (e.g. for FP10) would lead to the creation of unforeseen barriers, for example by introducing unclarity or new restrictions in the terms and conditions of grants in a civilian funding programme. These barriers could hinder the free movement of researchers, the dissemination of scientific knowledge, and the transfer of technology. Additionally, they could impede the recruitment and collaboration with top talent from Europe and beyond. The unpredictability of these barriers makes them challenging to anticipate and prepare for. By such mechanisms, the overall excellence of (civilian parts) of universities would be decreased proportionally. Lower excellence among universities would mean reduced capability to contribute research, innovation, and education in the cutting-edge scientific knowledge and technology that underpins broader efforts supporting European resilience, security and defence capabilities. It would thus be counterproductive to attempt to directly integrate defence and military components into Horizon Europe and FP10. In essence, while short-term enhancements to dual-use technologies can be beneficial, they should not compromise the long-term goal of achieving global leadership in advanced technologies. This leadership stems from excellence in research, innovation, and education.

We recognise that technology, particularly in its early stages of development often seen in university research, can hold potential for both civilian and defence end-uses. However, this does not necessitate the merging of civilian and military sectors. On the contrary, by maintaining a civilian focus, the results of excellent research and innovation funded by the

framework programme for research & innovation can also serve as a robust foundation for military innovation systems for further adaptations. Enhancing Horizon Europe will directly contribute to strengthening resilience and broader aspects of security in Europe. This includes areas such as water and food security, advancing the green and digital transitions, and bolstering the [resilience of democratic systems](#), among others. For this reason, enhancements of the ability of the European Union to fund defence-related research & innovation (e.g. through European Defence Fund) must not come at the expense of reduced budget for Horizon Europe, as that would be counterproductive for the overall resilience, safety and security posture of Europe. On the contrary, such efforts must be combined with a substantial boost to the budget for Horizon Europe and FP10.

- We call on the EU institutions to maintain the civilian focus in Horizon Europe, and its successor (FP10), allowing the framework programme to continue to set the global standard for supporting excellent research & innovation and cutting-edge science & technology.
- We urge the EU institutions to boost excellent science and technological innovation through reinforcement of Horizon Europe and by ensuring a robust budget and predictable and stable conditions for FP10, as elaborated in our [FP10 paper](#).

A related aspect of ensuring the framework programme for research & innovation can continue to excel, is to facilitate synergies and ensuring clear and coherent definitions. We acknowledge that the European Commission plays an active and constructive role in coordinating the evaluation of projects funded by Horizon Europe concerning ethics issues. By a similarly constructive procedure concerning issues of dual-use (and misuse and military equipment) the European Commission could clarify the importance of such issues to the broader community of beneficiaries; identify projects of potential military interest and prepare for synergy effects outside the context of the framework programme for research and innovation. This could increase the security awareness of beneficiaries, uphold the integrity of civil society while also systematising a channel linking relevant outcomes from the framework programme for research and innovation towards military innovation systems. The starting point for such efforts must be to ensure clear and coherent definitions by the EU institutions. For example, there are currently different and inconsistent usages in the white paper, in the export control regulation, and by the European Investment Bank around the terminology of 'dual-use'.

- We call on the European Commission to take an active role in ensuring clear and coherent definitions are used within and among the EU institutions and bodies, working closely together with relevant stakeholder organisations.

We offer our support for efforts to further clarify such definitions, and revise them when needed, together with other relevant stakeholder organisations.

2) Enhance European Defence Fund to strengthen dual-use technologies

The elaboration under the previous subheading underscores the importance of ensuring that Horizon Europe and its successor continue to excel in advancing research and innovation excellence. The core challenge identified by the [white paper](#) pertains to dual-use technologies, especially in 'grey zone' areas where classification of research is uncertain. In

such instances, defence-related funding instruments can complement funding instruments with civilian focus. To achieve this, we need effective and appealing instruments.

The European Defence Fund (EDF) is the European Commission's tool for supporting defence research and development. Of those CESAER Member universities that choose to engage with defence-related research, many have participated and are currently involved in EDF-funded projects. While the experience has been generally positive, improvements can be made. Specifically, the EDF should be enhanced to attract research and innovation proposals from a wider segment of the knowledge value chain and a more diverse set of actors, notably including universities as the only societal actor combining research, innovation and education at the highest level (e.g. in advanced research and technologies). This is needed to ensure a supply of talent also in defence-related areas.

Expanding the range of EDF-funded projects should coincide with a significant opening of the programme and a dedicated effort to attract new participants to engage directly in research and innovation activities within the EDF's scope, including those related to dual-use technologies. This notably includes universities of science and technology and their research and innovation talents who are willing and able to responsibly engage in such areas.

In addition to the direct value created by new scientific knowledge and technology from these projects, indirect but highly valuable benefits include fostering new connections and strengthening existing ones across the full defence-research-innovation landscape with all its players in academia, industry, and beyond. Such new and strengthened connections would also reduce the risk of duplication and fragmentation of research and innovation activities that can result from poorly connected research and innovation systems.

As we strive to enhance the EDF, it is essential to recall the conclusions from the previous subheading above. These conclusions highlight the indispensable role of Horizon Europe in fostering research and innovation excellence, which in turn bolsters long-term security and defence capabilities. Consequently, any efforts to reinforce the EDF should not undermine Horizon Europe or FP10, as such a move would be counterproductive. The enhancement of the EDF should go hand in hand with the fortification of the framework programme for research and innovation. An important dimension of this is that fewer countries are associated with EDF than with Horizon Europe, which means that Horizon Europe remains the indispensable instrument for safeguarding and boosting science & technology cooperation with partners both outside and inside Europe, including notably Switzerland and United Kingdom, to the enormous benefit also for the European Union.

[We urge EU institutions to expand the impact of EU defence-related funding instruments, particularly through the European Defence Fund, by:](#)

- [Positioning the EDF as a key tool for advancing dual-use technologies across a broader spectrum of the knowledge value chain, including through dedicated research actions.](#)
- [Reinforcing efforts to attract new participants \(particularly from universities\) to engage directly in research and innovation activities within the EDF's scope, including those related to dual-use technologies. The EU Defense Innovation Scheme could be an important tool for advancing such efforts. The intended outcome is to foster new, and strengthen existing, connections across the full defence-research-innovation landscape involving academia, industry, and beyond.](#)

We call on the European Commission to strengthen synergies and minimise duplication between Horizon Europe and EDF by:

- Increasing the number of 'spin-in' calls in EDF where new scientific knowledge and technology from the civilian sector are attracted towards the defence sector.
- Introducing 'spin-out' calls in EDF to support new (or strengthen existing) connections from the defence towards the civilian sector based around (part of) new scientific knowledge and technology generated in the defence sector.

As the above extends beyond the three options outlined in the white paper, the way forward presented in this position can be referred to as 'option 1.5'. Option 1.5 merges the optimal aspects of the current situation (e.g. with Horizon Europe) with significant enhancements (e.g. through 'spin-in' and 'spin-out' with EDF) that go beyond the status quo. This approach is fully cognisant of the immediate actions required to adapt to the evolving geopolitical landscape.

We are ready to provide our support, guidance, and feedback for further developments at the interface of dual-use technologies and EU funding instruments.

For more information and enquiries, please [contact](#) Secretary General Mattias Björnmalm.

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