

## Options for enhancing support for research and development involving technologies with dual use potential.

### Summary

The European Commission has outlined, in a White Paper, three [options for enhancing support for research and development involving technologies with dual use potential](#). These are: 1) to exploit synergies in existing programmes more, 2) to remove the exclusive focus on civil applications in the Framework Programme and 3) to develop a new instrument for dual use technology development. In this document, we outline how option 1, going further with existing measures and exploiting synergies better, is LERU's preferred option, as it would afford flexibility in responding to crises in a timely measure, and would allow for participation of universities within those countries which are ideologically aligned with the EU, or which have specific ethical issues against doing military research. LERU has many concerns over the removal of the 'exclusively civil' clause in the Framework Programme, yet understands that the boundaries between what has dual use potential and what doesn't is increasingly blurry, and removal of the exclusively civil focus of the Framework Programme would simply reflect a new reality. As such, LERU outlines several safeguards which should be added into the Programme if Option 2 is chosen. Finally, LERU does not believe that Option 3 is viable and is likely to add further complexity to an already crowded funding landscape, whilst not necessarily helping to exploit synergies better.

### Background

The European Commission, as part of its [European Economic Security Package](#) of 24<sup>th</sup> January 2024, released a White Paper on [options for enhancing support for research and development involving technologies with dual use potential](#).

- Option 1 presents what more can be done based on the current situation as possible measures could be implemented without changing existing legal bases. It would exploit synergies and leverage existing measures, such as the European Defence Fund spin-in calls, supporting dual use companies through the Invest EU programme and introducing exploitation obligations for Horizon Europe's projects related to critical technologies;
- Option 2 outlines how the exclusive focus on civil applications in selected parts of the successor programme to Horizon Europe could be removed;
- Option 3 outlines how a specific instrument could be established for dual use R&D. This does not seem to be the favoured option – as it would give additional complexity,

and lead to overlaps with R and D exclusively for the civil and the military sectors. This could lead to a joint undertaking, or a procurement instrument.

Options 2 and 3 are mutually exclusive.

LERU welcomes the opportunity to comment on this White Paper and contribute the views of research-intensive universities to this debate.

While there are positives and negatives for each of the three options presented by the European Commission in the White Paper, LERU has a strong preference for Option 1 - going further based on the current set-up. Option 2 requires specific safeguards to be put in place to ensure that the existing strengths of the Framework Programme are not compromised. LERU does not see Option 3 as a viable option.

### **Option 1 (going further based on the current set-up)**

This option would aim to improve the current set up and leverage measures already introduced to stimulate both research on technologies with dual-use potential with civil and defence applications, such as the European Innovation Council Transition Scheme and the EU Defence Innovation Scheme. It also aims to develop a common definition of technologies with dual-use potential with the European Investment Bank and the European Investment Fund to promote joint investments in such technologies for military mobility, green transition, critical infrastructure, etc. This option would be possible within the current Multiannual Financial Framework but would require better coordination on the EU level.

Under this option we foresee that EU programmes will maintain their very clear focus on either civil or defence R&D, thereby avoiding duplication. The White Paper has identified several other parameters that can be optimized to improve synergies between civil and defence R&D whilst avoiding undue burdens for the Commission/Agencies and applicants and beneficiaries. It offers the possibility of rapid implementation within the current Multiannual Financial Framework, better adapted to the urgency of the current geopolitical climate and suggests that new funding for dual use technologies will become available. Finally, the non-eligibility / exclusion of associated and third countries in Horizon Europe would be kept to minimum, which would allow long standing research collaborations to continue.

Especially in fundamental research, it can be difficult to identify possible dual use potential from the start. This goes for a broad spectrum of research fields and not just those few technological areas (such as digital, cybersecurity, energy, mobility, health, materials, and space) mentioned by the European Commission. High-risk, high-reward research with dual use themes or adequately address emerging security concerns may not be adequately supported and would require careful planning to ensure funds are used effectively and ethically and may not be suitable for all universities. Finally, there may be higher

coordination costs/efforts to ensure synergies are exploited. Hence, we ask the Commission, if this option would be chosen, that methods and procedures to clarify these synergies, to enable researchers to understand and fully utilize the funding landscape. As the current Framework Programme already funds R&D on technologies with dual use potential (albeit with civil applications), the Commission could, specifically for these technologies, develop, where most relevant, complementary timelines or designated pathways from one programme into another, including follow-up funding, potentially with military applications in mind, thereby reducing funding gaps, talent, and technology loss. In a forthcoming paper on FP10, LERU outlines how such synergies and pathways should be developed with the successor of Erasmus+, the European Defence Fund (building on the existing spin in calls), the European Space Programme, EU4Health, the Digital Europe Programme, with ESIF and other relevant programmes, possibly including programmes at Member State level. Finally, any additional obligation to exploit results in the EU should also at a minimum, as implied by Regulation 2021/695 Article 39, extend to associated third countries.

The boundaries between what has dual use potential and what doesn't is increasingly blurry – almost all research could be used for dual use purposes in some way, even social sciences, and humanities research. In LERU's view, the Framework Programme shouldn't overtly promote military research itself, but neither should we be too cautious about a research area simply on the grounds of dual use potential. Instead, we should be vigilant about choice of partners and protection of intellectual property. With that in mind, we would also consider Option 2, subject to specific safeguards, a few of which are outlined in the section below, being put in place.

### **Option 2: Remove the exclusive focus on civil applications in selected parts of the successor programme to Horizon Europe**

This option suggests replacing the words '*exclusive focus*' with '*focus*' in selected parts of the new Framework Programme. All other parts would remain exclusively focused on civil applications. This option would allow for strategic emerging technologies to be supported in the Framework Programme, independent of whether the technologies have a military or civil application. This would possibly lead to fewer coordination costs/efforts than Option 1. Allowing dual use in upcoming Framework Programmes could help ensure EU strategic autonomy in critical technology fields and research areas. These areas may not be funded if the exclusive focus on civil applications remained. It might also shorten the path from research to application, and there could be potential synergy in combined civil and military research. Furthermore, many research areas, besides those mentioned by the Commission, have dual use potential it would be an advantage not to exclude them from FP10. This would likely attract more industry stakeholders, contributing to cross-fertilization of civil and defence industries.

However, LERU has some significant concerns about this option.

### **1. It is not easily adaptable to changes in the geopolitical climate**

The past years have shown that any research programme on technologies with dual use potential or military technologies will need to be easily adaptable to changes in the geopolitical climate, much faster than can be adapted by multiannual strategic plans or even by (bi-)annual work programmes. Including this research in a large vehicle such as the Framework Programme considerably restricts the agility of any policy to adjust to new geopolitical demands as new legal provisions will be needed. Indeed, it is unclear what Member States will decide after the upcoming elections.

### **2. Dual use potential is still unclearly defined**

At present, the definition of dual use potential is unclear. As the White Paper states: ‘there is no clear definition of dual use potential, and the concept has broadened considerably (focusing not only on military defence but also civil security)..’ It will be difficult to determine in which programme parts “technologies with dual use potential are most prominent”. LERU recognizes that, almost all research, including social sciences and humanities research, could be used for dual use purposes. This it will be necessary to provide a robust definition of dual use potential – does this refer to those items which have both a civil and military application more broadly, those items on Annex 1 of [REGULATION \(EU\) 2021/821 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 May 2021 setting up a Union regime for the control of exports, brokering, technical assistance, transit and transfer of dual-use items \(recast\)](#) (the dual use regulation), or something else?

### **3. Long-standing partnerships would be restricted**

Consortia would need to engage in lengthy negotiations upfront before even applying to certain parts of the next Framework Programme - as both, academic and private institutions will potentially be restricted by their own ethical and regulatory frameworks in participating in dual-use related activities. In Germany, 70 out of 423 universities for example, have an exclusively civil clause, which would restrict their own participation.

Option 2 envisages the possibility of restricted third country access to the parts of the programme involving technologies with dual-use potential. While acknowledging the EU’s imperative to protect its own security, the nature of the security threats in an increasingly polarised world suggests that restricting collaboration with allied, or ideologically aligned, third countries could be a missed opportunity for Member States. Restricting participation to parts of FP10 due to dual-use considerations risks the break-up of well-established international research networks to the eventual detriment of all involved - an effect that has already been made apparent when the UK and Switzerland were excluded from the Quantum

Flagship under Horizon Europe. In addition, more security measures will be needed within universities, restricting information exchange and collaboration within research groups even further than is already the case under the current calls restricting access. This goes against the academic culture of openness and should always remain the exception.

#### **4. Bureaucracy would be increased**

Designating future Framework Programmes dual-use/non-civil would cause considerable bureaucratic burden on participants (not least because of the substantial differences between different Member States and Associated Countries in their own dual use frameworks which would make finding a common EU framework likely very difficult). This would be in addition to increasing national bureaucracy in this space, as we have seen with recent legislation in the UK. We would be concerned that this added bureaucracy and the blurring of lines between civil and dual use would very likely deter researchers from applying to the programme.

#### **5. Universities are concerned about a shift of funding towards dual use/ military purposes at the expense of other aspects of the programme**

Prescribed inclusion of potentially dual-use and dual-use measures in a successor to Horizon Europe risks benefiting defence research and development disproportionately at the expense of civil, with less funding for mainstream research projects with civil applications than for those with defence applications. To some, this could look like a mechanism for providing the defence sector with an 'easy top-up' to its existing funding mechanisms. Research on technologies with dual use potential that is intended to lead towards application in the defence industry will most likely be of a high TRL level, shifting the focus to applied research rather than fundamental research. If only a few technology areas are singled out as dual use in FP10 (digital, cybersecurity, energy, mobility, health, materials, space etc.) it could result in a smaller budget for research and development in other fields. Earmarking pillar 2 funding in FP10 for technologies with dual use potential may lead to a loss of funding for the societal challenges that are currently being funded under Horizon Europe (or any other new societal challenge that would be introduced in the new Framework Programme). This would mean less budget for research relating to the Green Deal, Digital Transition, Migration, etc., or even worse, for bottom-up research under MSCA or ERC. This would fundamentally undermine the purpose and objective of EU Framework Programmes.

There are overlapping programs in which research is funded specifically to support European defence, such as the European Defence Industrial Strategy (EDIS). These should be given a shielded/separate status and should not be fully integrated into the EU's system-wide research programme, if only to prevent **all** research from having to fall within the increasingly

strict knowledge security regime. This also to prevent that scientific core values come under even more pressure.

## **6. Universities have ethical concerns over inclusion of support for military applications in the next Framework Programme**

Research on technologies with dual use potential is already possible under Horizon Europe. However, the applications in the research that is funded can only be of a civil nature. Removing the exclusive civil focus in the next Framework Programme will likely lead to the normalization of military research. This would require a huge mindset shift within universities and would also jeopardize the proud legacy of the European research and innovation Framework Programmes as the world's largest, exclusively civil, science and technology Framework Programme.

Furthermore, including research into technologies with dual use potential in military applications in the Framework Programme makes the entire programme vulnerable to criticism from non-governmental organisations, journalists or citizens who are opposed to military research, and could potentially discredit the entire Framework Programme. Not only will Europe lose the ability to criticize countries which are refining the model whereby politics links the agendas of the knowledge sector, the government and defence/military, it also raises the question of whether non-European countries will keep the confidence to collaborate with European universities. Indeed, entangling research and politics too much may threaten the independent position of science.

## **7. The added value of removing the 'exclusively civil' point is unclear**

It is unclear why many of the benefits of this option listed in the paper (such as mutual spin-in calls, complementarities with national priorities) would not be possible in option one as well. Indeed, we suggest that a better model, which would satisfy the need for better synergies between civil and military applications would be that Horizon Europe retains exclusive civil funding focus at the proposal/tender stage, with the option for pathways for dual-use/potentially dual-use exploitation in live projects using additional funding from the European Defence Fund where possible and where partners agree.

## **Safeguards are needed to preserve the existing strengths of the Framework Programme**

Clearly, universities have many and important concerns over the removal of the 'civil only' clause within the Framework Programme. However, we understand that there is significant pressure from business and from some parts of the European political sphere to improve European autonomy, especially with the current geopolitical tensions. As such, we would like to suggest the European Commission should ensure full transparency and extensive stakeholder involvement on the preparation of introducing dual use in FP10 from a very early

stage, including universities as a crucial stakeholder in the debate. Whether dual use is limited to a limited number of specific technology areas or is more broadly introduced across FP10, it must be done in a way that is easy for stakeholders and actors to navigate and as simple as possible when it comes to rules. It will also be important to indicate how projects will be selected – will it be solely on excellence of the project in question, or will other criteria come into play, for example, will there be a bias for applications with possible dual use applications over other, equally ranked, projects?

We would like to suggest the following safeguards as a minimum, should Option 2 be chosen:

1. To facilitate applicants' proposals preparation in next Framework Programme, it would be useful if calls for proposals in which military relevance is an option are clearly flagged as they are now, so that universities have the choice of participating or not, based on their own ethical considerations.
2. Research with spin-offs that can be used for both civilian and military applications should be subject to an assessment of the risk of military misuse. In other words, a kind of ethical assessment should be carried out, as is done for other issues. A suitable ethical framework should be developed for this purpose. All universities should have clear internal policies and procedures on dual use matters. An internal committee should be implemented to advise applicants, their deans, and the European Commission on whether the research proposal is ethically sound or how it can be made to be.
3. Researchers must always retain the option to prevent military applications of their research as much as possible or to submit non-military-oriented applications within sub-programmes of the successor to Horizon Europe.
4. Excluding all third countries from participation might exclude inappropriately benign and potentially valuable collaborations such as the UK and Switzerland, and such an approach could be too much of a blunt instrument. The US and Canada are going down the route of listing specific organisations for which specific approval is required rather than whole countries. A balanced approach might be to list safe countries, then elsewhere list specific organisations for which advance approval is required. Horizon Europe already has the possibility to exclude some countries from research programmes if needed.

The final option, **Option 3: Create a dedicated instrument with a specific focus on R&D with dual-use potential, is less attractive to LERU**

This option is mutually exclusive with Option 2 and could take several forms. The options outlined include a specific instrument devoted to research with dual-use potential, with its own budget and regulations; a dedicated mechanism or structure to increase support for EU market uptake of technologies with a dual use potential; or supporting the development of

critical technologies through dual-use flagship projects. These options are not well defined in the White Paper and appear to be less favoured by the Commission.

While one of the suggested ways to implement this option (a dedicated mechanism or structure) could be interesting, for example by creating e.g. an agency responsible for supporting market uptake of EU projects with dual use potential. However, it would require careful planning to ensure funds are used effectively and ethically and may not be suitable for all universities (for example, those with peace charters). As the Commission acknowledges, a specialised instrument would add more complexity to the already complicated European R&D environment. This would contrast with, and negate current efforts, to simplify the European research support landscape, a need that has recently been highlighted in the European Commission's own [review](#) of the Horizon 2020 Research and Innovation Framework Programme. If it is felt that participation needs to be restricted for certain particularly sensitive topic, it should be done carefully on a case-by-case basis, and only where necessary.

A new programme will most likely compete with FP10 for budget, which is already unable to fund many excellent research proposals. If a new programme only covers a limited number of technology fields there will still be research and development in other fields with dual use potential. Thus, a clear divide between types of research will not be achieved and the current problems not solved. Indeed, it is not clear to LERU how an extra programme could offer a solution that cannot already be reached by facilitating synergies between the current programmes.

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