

2.2.3. EDF-2022-LS-RA-DIS-NT Non-thematic research actions targeting disruptive technologies for defence

Budget

The Union is considering a contribution of up to EUR 10 000 000 for this topic under the call EDF-2022-LS-RA-DIS

Number of actions to be funded: Several actions, addressing different solutions, may be funded for this topic.

Range of financial contribution of the Union per proposal: the requested funding should match the ambition of the proposed action and be duly justified. In any case, the requested funding should not exceed EUR 4 000 000.

Objectives

The specific challenge is to lay the foundations for radically new future technologies of any kind with unexpected impact that aims to bring radical technological superiority over potential adversaries. This topic also encourages the driving role of new actors in defence research and innovation, including excellent researchers, ambitious high-tech SMEs and visionary research centres of big companies, universities or research and technology organisations.

Scope and types of activities

Scope

Proposals are sought for cutting-edge, high-risk/high-impact research leading to game-changing impact in a defence context. They must have the following essential characteristics:

- a disruptive impact in a defence context: Proposals need to clearly address how the proposed solutions would create a disruptive effect when integrated in a realistic military operation;
- radical vision: Proposals must address a clear and radical vision, enabled by a new technology concept that challenges current paradigms. In particular, research to advance on the roadmap of a well-established technological paradigm, even if high-risk, will not be funded;
- breakthrough technological target: Proposals must target novel and ambitious scientific or technological breakthroughs that can be experimentally assessed, and the suitability of the concept for new defence applications must be duly demonstrated. Basic research without a clear technological objective targeting defence applications will not be funded.

The inherently high risks of the research proposed must be mitigated by a flexible methodology to deal with the considerable science-and-technology uncertainties and for choosing alternative directions and options.

Proposals should include clear descriptions of the proposed criteria to assess work package completion.

Types of activities

The following types of activities are eligible for this topic:

Types of activities (art 10(3) EDF Regulation)		Eligible?
(a)	Activities that aim to create, underpin and improve knowledge, products and technologies, including disruptive technologies, which can achieve significant effects in the area of defence (generating knowledge)	Yes (mandatory)
(b)	Activities that aim to increase interoperability and resilience, including secured production and exchange of data, to master critical defence technologies, to strengthen the security of supply or to enable the effective exploitation of results for defence products and technologies (integrating knowledge)	Yes (optional)
(c)	Studies , such as feasibility studies to explore the feasibility of new or upgraded products, technologies, processes, services and solutions	Yes (optional)
(d)	Design of a defence product, tangible or intangible component or technology as well as the definition of the technical specifications on which such design has been developed, including partial tests for risk reduction in an industrial or representative environment	Yes (optional)
(e)	System prototyping of a defence product, tangible or intangible component or technology (prototype)	No
(f)	Testing of a defence product, tangible or intangible component or technology	No
(g)	Qualification of a defence product, tangible or intangible component or technology	No
(h)	Certification of a defence product, tangible or intangible component or technology	No
(i)	Development of technologies or assets increasing efficiency across the life cycle of defence products and technologies	No

Functional requirements

This call is open to any technology with a high disruption potential. Proposals should describe the targeted functionalities and the foreseen means to measure progress toward the achievements of these functionalities.

Expected impact

- Scientific and technological contributions to the foundation of a future technology with disruptive applications in the area of defence.
- Enhanced innovation capacity of the European Defence industry by identifying and exploring ground-breaking concepts and approaches or by applying technologies and concepts previously not applied in the defence sector.
- Enhanced competitiveness of the European defence industry and creation of new defence markets.
- Enhanced defence research and innovation capacity across Europe by involvement of actors that can make a difference in the future such as excellent researchers, ambitious high-tech SMEs or visionary departments of big companies, research centres and universities.