PREPARATORY ACTION ON DEFENCE RESEARCH

SESSION Technology Foresight

INFODAY AND BROKERAGE EVENT
12 APRIL 2018
PREPARATORY ACTION ON DEFENCE RESEARCH

Call Text presentation CSA Topic Call PADR-STF-02-2018

The European Defence Research Runway – Part II
Technology non-dependence essential for strategic autonomy and freedom of action of EU Member States;

Uninterrupted supply from trusted sources of key materials, components and technologies;

Technologies subject to ITAR and EAR limit freedom of action;

Foreign-sourced components and materials not trustable for sensitive functions.
Strategic technology foresight is challenging but needed in view of:

- preventing long term critical defence technology dependencies;
- avoiding staying behind from global competitors;
- ensuring the independent development of cutting edge capabilities;
- identifying and prioritising components and materials desirable to be available in Europe in the future;
- providing proposals for research topics for a follow on defence research programme.
The action needs to address at least the following activities:

- **Mapping of ITAR and other non-EU sourced** components and materials;

- Identify **critical technology building blocks** and possibly components for future systems and disruptive capabilities for which European technology non-dependence will be crucial;

- Develop a **methodology to assess the supply risk** of technologies and components of point a) and b) and their criticality for armed forces and the defence industry;

- Prepare **technology roadmaps**, ideally including cost substantiated predictions, and suggest **business models** for selected technologies, taking into account supply risk and criticality.
Activities should benefit and when appropriate complement or incorporate existing works, and in particular:

- the **European Defence Technology Runway Part I**;
- the study “**Study on the dual-use potential of dual-use potential of Key Enabling Technologies (KETs)**”;  
- the study “**Raw materials in the European defence industry**” and relevant **activities of the Joint Research Centre**;
- relevant **work of the European Defence Agency**, the “**Leadership in Enabling and Industrial Technologies - Space**” research programme under Horizon 2020 and the European Space Agency (ESA), and in particular the **Critical Space Technologies** nondependence actions for identified in the frame of the Commission-ESA-EDA Joint Task Force.
Proposals should include elements to ensure continued monitoring and updating beyond the action's lifetime.

EU contribution: EUR 1 500 000 to 2 000 000.

This topic is complementary with topic "PADR-STF-01-2017: The European Defence Research Runway – part I". Grant agreements under this topic will therefore include the options for 'complementary grants.'

No more than one action will be funded.

Deadline for applications: 28/06/2018
PADR-STF-02-2018 - Expected impact

The European Defence Research Runway – Part II

- Make the EU and the Member States understand the dependencies for defence technologies and the ways to prioritise and address them;
- Underpin coordination of defence research activities at the European and national level and improve synergies with space and other civil technology research activities addressing non-dependence needs;
- Provide input for the long term agenda for defence research in the EU in the area of critical defence technologies;
- Explore themes for a future European Defence Research Programme.

Type of Action: Coordination and Support Action (CSA)
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Information on PADR-STF-2017

PYTHIA Project
Strategic Technology Foresight 2017 / 2018
The European Defence Research Runway

• PADR-STF-02-2018 is complementary to PADR-STF-01-2017

• Grant Agreements under this topic will therefore include options for “complementary grants”
  - Including, in particular additional Access Rights to background and results for the purposed of the complementary grant

• PADR-STF-02-2018 should benefit from PADR-STF-01-2017:
  - Identifying technologies
  - Sharing methodology
Rapid changes in many domains with huge impact on the global security situation

Monitor important trends and their defence and security implications

Includes Horizon Scanning & Technology Watch:
- Signalling of emerging threats
- Identification of emerging technologies
- Potential opportunities + analysis of relevant technological developments
Strategic technology foresight is challenging but needed in view of:

- the **added value of a common European approach** in properly covering the full range of technologies and sources;
- the need to build a **common understanding of future technology** and its impact on defence trends in order to plan and coordinate accordingly our actions;
- the need for an **innovative approach** with respect to the way these activities traditionally are conducted;
- the **growing relevance of the civil technologies** for defence and the need to include the developments in the civil sector in the exercise;
- identifying **new technologies**.
Strategic Technology Foresight 2017 – Awarded Project

Predictive methodologY for TecHnology Intelligence Analysis

• Deliver a methodology for improving civil and defence technology foresight.
  - Devise an innovative methodology for strategic technology foresight,
  - Starting from a study of the cognitive factors influencing analysts’ ability to perform accurate forecasting,
  - Leverage big data analytics techniques for automatically analysing large volumes of technology information

• Identify future disruptive technologies and recommend themes for European defence research.

• Duration: 18 months

• EU grant: €1 million approx.

• Consortium: Engineering Ingegneria Informatica S.p.A. (IT), Zanasi & Partners (Italy), Expert System France (France), Hawk Associates Ltd (UK), the Military University of Technology of Poland, the Bulgarian Defence Institute, Fondazione ICSA from Italy and Romania’s National Defence University.
Questions?

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Thanks for your attention
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Back-up slides
Strategic Technology Foresight - Scope (1/3)

The European Defence Research Runway

• Performing joint technology foresight activities supported by methodologies such as horizon scanning, technology watch, scientometric tools, expert consultation activities.

• Identifying emerging defence research areas for potential exploration in the next Multi-annual Financial Framework.

• Propose and validate a methodology and process for strategic technology foresight activities to be carried out cyclically.

• Take into account similar activities conducted in EDA, NATO and other military and/or civil organisations.
Activities that should be considered could include, amongst others:

- **Collection of information** (national sources, EU research programme, occidental and non-occidental sources);
- **Analysis** (geopolitical trends, defence and security trends, technology, industrial trends);
- **Engagement with European industry** trade bodies;
- **Evaluation/assessment for defence and security** (future scenario-based evaluations such as Disruptive Technology Assessment Games, consultations of technology and military experts, input from “unconventional” groups with an outside view, more creative thinking, …);
- Defining and setting up **strategic trends for the medium and long term**;
- **Management and controlled dissemination of results** (secure web-based access with public and restricted dissemination).
The strategic technology foresight should be coupled to a process and method for scoping EU-funded defence research based on scenarios to illustrate potential future conflicts.

Proposals should include elements to ensure continued monitoring and updating beyond the action's lifetime.

EU contribution: EUR 0.95 million.

No more than one action will be funded.

Deadline for applications: 21/09/2017