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European Synergies & Innovation Directorate
27 June 2016

2nd Defence Supply Chain Network meeting

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Exchange of views on Preparatory Action for Defence Research

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European Commission presentation

Defence related Research and Preparatory Action

DSCN– 27 June 2016

Background

- Commission Communication July 2013
- Support by the European Council (December 2013, June 2015)
- Legal base Art 54.2 Financial Regulations
- Duration 2017-2019
- Implementation up to 2021

Consultation

- Intensive rounds of consultation in 2015 : 5 workshops on modalities, governance and topics
- Group of Personalities. Sherpas met intensively: 10 meetings between March 2015 and January 2016 (http://www.iss.europa.eu/publications/detail/article/report-of-the-group-of-personalities-on-the-preparatory-action-for-csdp-related-research/)
- Specific WG on IPRs

Governance

- General governance structure following H2020 (Programme Committee, Advisory Group, Executive Agency)
- As If Program Committee with representatives of MS
  - 4 meetings
  - Next meeting July 2016

Modalities

- Financing 100% direct, 25% flat rate for indirect
- Grants
- Participating entities
- Evaluation of proposals
- Classified information
- IPRs

Topics

- Strong defence orientation
- Convergence on mix
  - Technology Demonstrator
  - Interoperability and Common Standards
  - Critical Defence Technologies
  - Future Disruptive Technologies

Way forward

Action	Indicative date
Budget proposal 2017 adopted by Commission	June 2016
Adoption Scoping Paper	July 2016
Finalisation of rules of participation	September 2016
Communication on PA	December 2016
Preliminary agreement on Work Programme	November 2016
Delegation agreement with EDA	May 2017
Call for proposals	June 2017
Grant Agreement Preparation	End 2017

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EDA presentation

EDA process for the Technology Demonstrator & Critical Defence Technologies

- Input of topics from MS and industry
- Ranking of topics based on scoring (QMV) and knock-out criteria
- Clustering
- Prioritization exercise
- Workshop of 17- 18 May: consultation of MS
- Result: - narrowing down the topics
  - merging topics + integration of topics in larger topic
  - descriptions tailored
- Consolidated views of MS sent to the Commission*

*Proposed options do not prejudge the final selection of the Commission after consultation of the as if PC

Clusters for the TD & CDT

Technology demonstrator

- Information superiority, cyber defence and sensor technologies
- Maritime capabilities and Autonomous platforms technologies and RPAS
- Logistics and energy
- Force protection and soldier systems
- Offensive weapons and major platforms

Critical Defence Technologies

- Information superiority and cyber defence
- Sensor technologies and components
- Logistics and energy
- Force protection and soldier systems
- Offensive weapons and major platforms

Criteria CAPABILITY-DRIVEN TECHNOLOGY DEMONSTRATOR

General criteria:

- Strategic relevance for CSDP
- Innovative / leading edge technologies
- EU added value
- Potential for future collaborative (acquisition) programme
- Support to the competitiveness of industry

Specific criteria:

- Interoperability
- Open, Modular and Scalable Architecture
- Higher Technology Readiness Level than 5
- Link to CDP Priorities

Topics for TD

1. Cross-border Cyber Situational defence awareness
2. Maritime Surveillance RPAS: a federative programme with projects on data exchange and fusion, sensor payloads, the platform (in a manned/unmanned mix), the integration of the platform in a C2 environment and various cyber defence aspects
3. Autonomous convoying of vehicles
4. Soldier system with a focus on an Open Soldier Reference Architecture, and integrating and the testing of new technologies
5. Counter hostile drones, including the effectors to destroy them such as lasers

Criteria CRITICAL DEFENCE TECHNOLOGIES

Criteria

- Critical technology according to the definition
- Possible candidate for European cooperation
- EU non-dependence
- Need to develop or maintain industrial capability
- Issues associated with technology transfer capabilities
- Feasible alternative unlikely
- Long term strategic capability at risk
- Support any priority of EU Capability Development

Topics for CDT

1. Coalition Cyber Situational Awareness (area of interest; topic to be defined in greater detail)
2. Combined use of GNSS Systems (area of interest; potential topic to be defined in greater detail)
3. Advanced digital high performance System on Chip and in Package processing technologies for secure, safe and reliable defence applications including technologies such as reprogrammable FPGAs
4. Demonstration of next generation European key enabling sensor components technologies for military applications in radar, communications and electronic protection/warfare.
5. Use of Active Electronic Scanned Arrays (AESA) for Electronic Warfare (EW) applications
6. Cognitive Radar Platform

Topics for CDT

7. Biological Standoff Detectors
8. Optimized decontamination methods and procedures in urban areas
9. Procedures and new technologies for CBR-IED disablement.
10. Advanced holistic protective equipment (including blast, impact, C-agents, and camouflage)

11. A. Missile fuels, components and materials

OR:

11. B. Modularity and Precision for munition: Precision Guided Ammunition (PGA) aims to achieve precision effects.

PA Schedule

- Launch first Call foreseen in mid-2017
- Signature of grant agreement(s) – December 2017 or beginning 2018

Innovation Support Scheme

- Proposal for Innovation Support Scheme
- Spin-in of civilian innovation in defence
- Address non-traditional companies (both SME and larger industry)
- Proposal will be discussed in the meeting of the PA coordination meeting of 13 July

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Industry presentation

Optitec cluster

[redacted]

Preparatory Action for Defence Research: Perspective of a cluster

[redacted]

2nd meeting of the Defence Supply Chain Network (DSCN)
Brussels, 27 June 2016

Presentation outline

- Photonics cluster OPTITEC
  - ID card
  - Areas of strategic activities
  - Value chain
- Preparatory action
  - Implementation modalities
  - SME challenges
- Conclusions & recommendations

ID CARD

- Creation: 2000
- Type: Non-profit association
- Members: 211
- Employees: 11
- Membership diversity: Industry, laboratories and universities
- Headquarters: Marseille, Provence-Alpes-Côte d'Azur (PACA) region, France
- Key mission: Promotion & Development of optics & photonics activities in south of France

Key priorities
4 areas of strategic activities

Optitec
Pôle photonique & imagerie

GREEN PHOTONICS

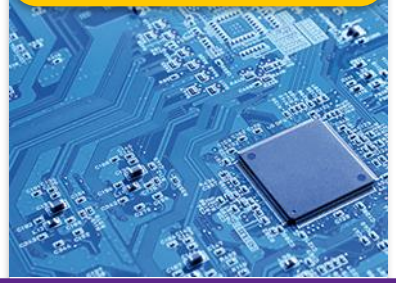
› Photonic, key enabling technology

› Increase production of renewable energy [PV industry, Lightings]

›Waste sorting and treatment

›Analyse of pollutants [in air, water and soils]

INDUSTRIAL PROCESS AND AGRO-FOOD MARKET



› In-process control in Agro-food industry

› Optical devices for manufacturing

SECURITY & SURVEILLANCE

› Integrated systems of surveillance

› Optical instrumentation for satellite observation

› Transport and traffic safety

SCIENTIFIC & MEDICAL INSTRUMENTATION

› Medical imaging & instrumentation

› Cancer diagnosis devices

› Instrumentation for large scientific projects (ELT, ITER…)

Value chain

- 134 entreprises (80% SMEs)
- 37 research institutions
- 14 educational institutions
- 26 partners

- **Big industrial groups & midcaps:** *Thales Alenia Space, Thales Optronique, DCNS, EDF, Bertin Technologies, Cilas, …*

- **Renowned research laboratoires & universities:** *CEA, ONERA, IRSTEA, INRIA, CNR, Aix-Marseille University…*

Why should clusters & their members take advantage of «dual-use» R&D?

- R&D in general is seen as a vital part of every company wanting to develop its market position.

- «Dual-use» R&D enables companies to:

  - Diversify activities and focus on multipurpose technologies;

  - Identify competitive strengths;

  - Increase efficiency through downstream and upstream cooperation;

  - Improve awareness and understanding of the structure and dynamics of civilian and defence sector.

Preparatory Action (PA): Implementation modalities

- EC in the role of coordinator, EDA as the implementing agency w/ technical know-how (support of MoDs);
- Industrial participants: 'pre-qualification process' to prevent non-European companies running away with EU funding;
- Funding rate: preferably 100% as competition getting direct/indirect state funding through national programs;
- Project consortia: at least 3 partners from 3 different MS;
- Proposal evaluation: need for all classified process, evaluators designated by MoDs;
- Elaboration of WPs (annual, biannual…?): SRA in order to avoid duplication with national research programs, need for validation by MoDs.

SME challenges

- Mainly niche products/services or building blocks for the final solution/end-product;
- Limited financial/human resources;
- Underrepresented in discussions between government and industry associations;
- Rarely capable of leading consortia and often lack visibility on EU level; how to find the right partners?

Conclusions & recommendations

- Need to ensure continuous and adequate access to information; MoD PoC to verify the relevance of projects?
- Accelerated evaluation/administrative process (currently 8 months for H2020 collaborative projects)
- Dedicated bottom-up support scheme for SMEs (H2020 SME Instrument, DGA RAPID);
- Future procurement programme? Certain instruments in the field of security already exist (PCP/PPI), but no real interest from MS.
- Role of research institutions/laboratories?

Optitec
Pôle photonique & imagerie

http://www.pole-optitec.com

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