

Summary

- An opportunity to improve NATO approach to IM, HC and Risk has been identified
- The NATO WG has developed outline proposals for a simplified document structure, new improved content, and the work programme needed to deliver these.
- **We are now seeking comment, engagement and support from the wider IM and HC community for what is an ambitious and complex undertaking: to standardize, harmonize and streamline the NATO approaches to IM, HC and Risk Assessment.**



The 3rd European IM Day
Amsterdam, 18-19th May 2017

Session chair
**Serge
Bordachar**

SESSION 2

REGULATION & LEGAL FRAMEWORK

IM Policies & Implementations

Overarching Framework

João Castelao de Abreu

Project Officer Ammunition & Logistic Support, EM, Missiles & Munitions – EDA

Thomas Honke

Project Officer Qualification, Test & Evaluation, Standardisation – EDA

“How European qualification may be driven and influenced by technology”



How European Qualification may be driven and influenced by Technology

João ABREU, PO Ammunition & Logistic Support
Thomas HONKE, PO Qualification, T&E and Standardization
18 May 2017

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INTRODUCTION

RESEARCH ON AMMUNITION
TECHNOLOGIES

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CONCLUSION



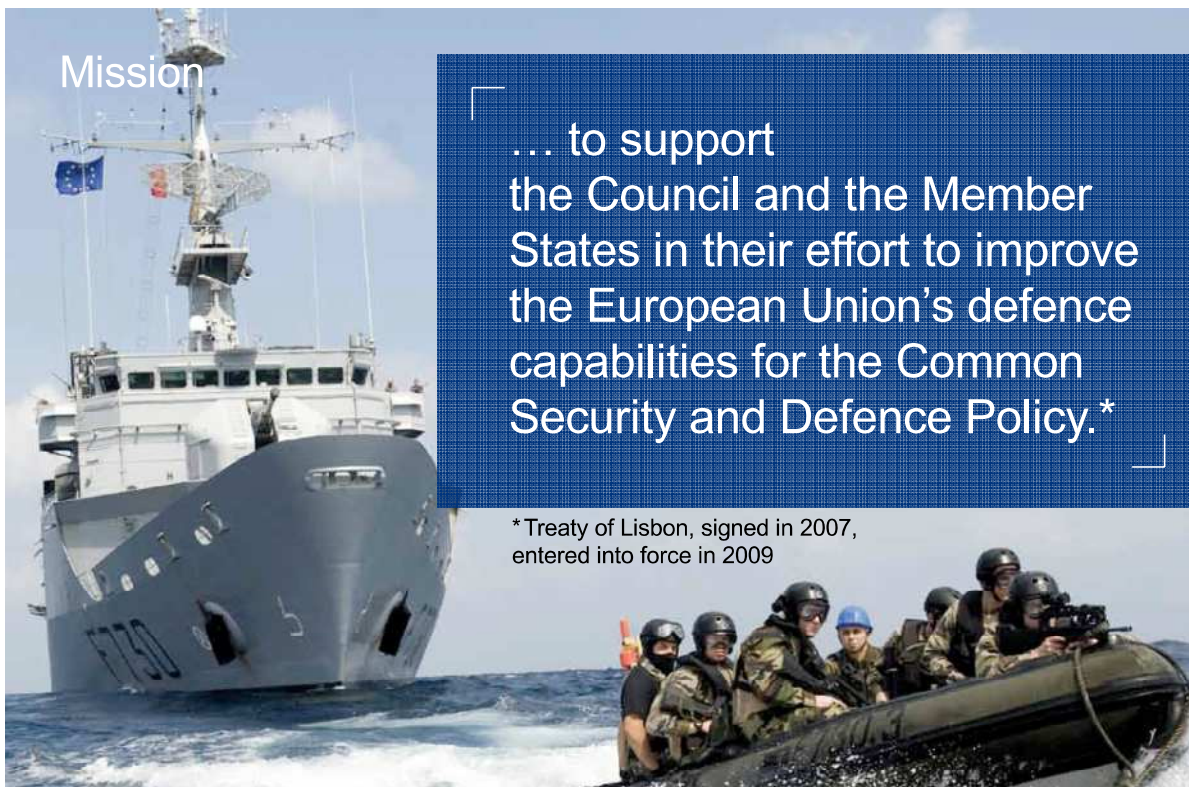
Introduction

Together for a stronger Europe

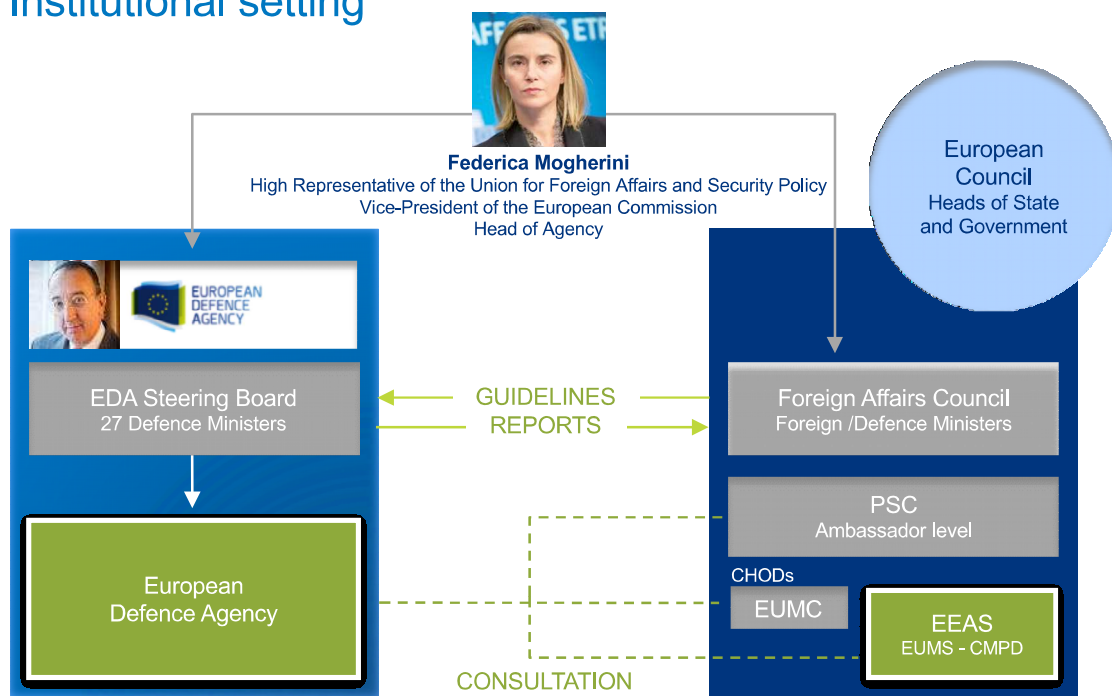
Mission

... to support the Council and the Member States in their effort to improve the European Union's defence capabilities for the Common Security and Defence Policy.*

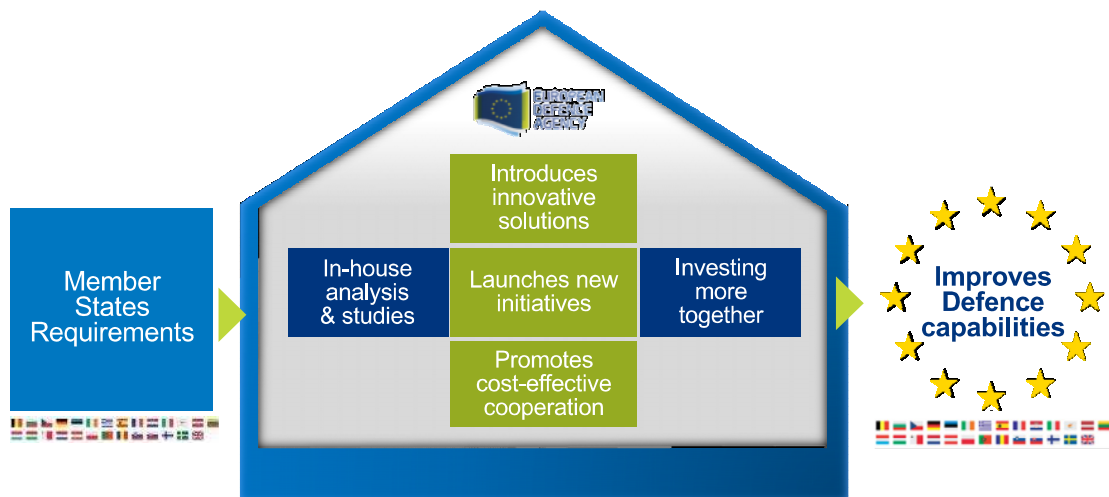
* Treaty of Lisbon, signed in 2007, entered into force in 2009



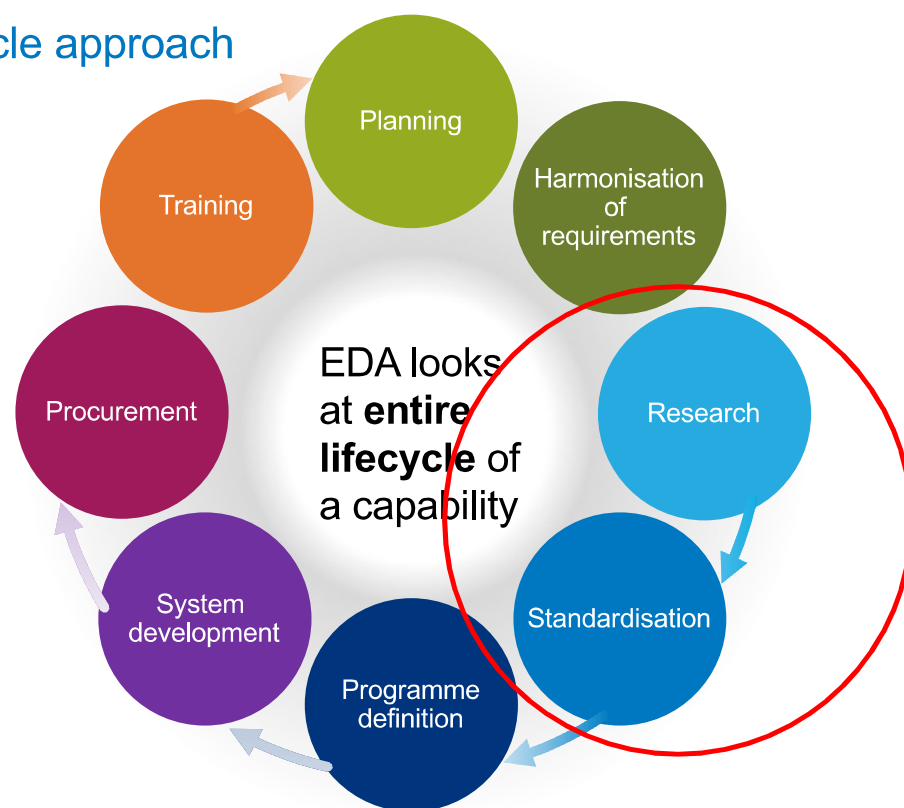
Institutional setting



A catalyst: from Member States to Member States



Lifecycle approach





Research on Ammunition Technologies

CAPTechs – Technology domains & networks

Capability, Armament & Technology			European Synergies and Innovation		
Information Superiority	Intervention & Protection		Innovative Research		
Communication Information Systems & Networks System of systems, Battleref and Modelling & Simulation	Aerial Systems	Ammunition Technologies	Materials & Structures		
	Ground Systems		Technologies for Components and Modules		
	Naval Systems		Radio Frequency Sensors Technologies		
			Electro-Optical Sensors Technologies		
			CBRN Protection and Human Factors		
			Guidance & Control		
			Energy WG		

The detailed technical coverage of each group is posted on the [EDA WEBSITE](http://www.eda.europa.eu)

CapTech Ammunition Technologies

CapTech Ammunition Technology is a group of Energetic, Missiles and Munitions (EMM) experts whose task is to act as a contributor to enhancing European Defence capabilities, through harvesting new technological opportunities and launching collaborative efforts

CAPABILITY NEEDS:

- Deliver effects (via EMM) in a precise, scalable and safe way

TECHNOLOGIES/RESEARCH DOMAINS:

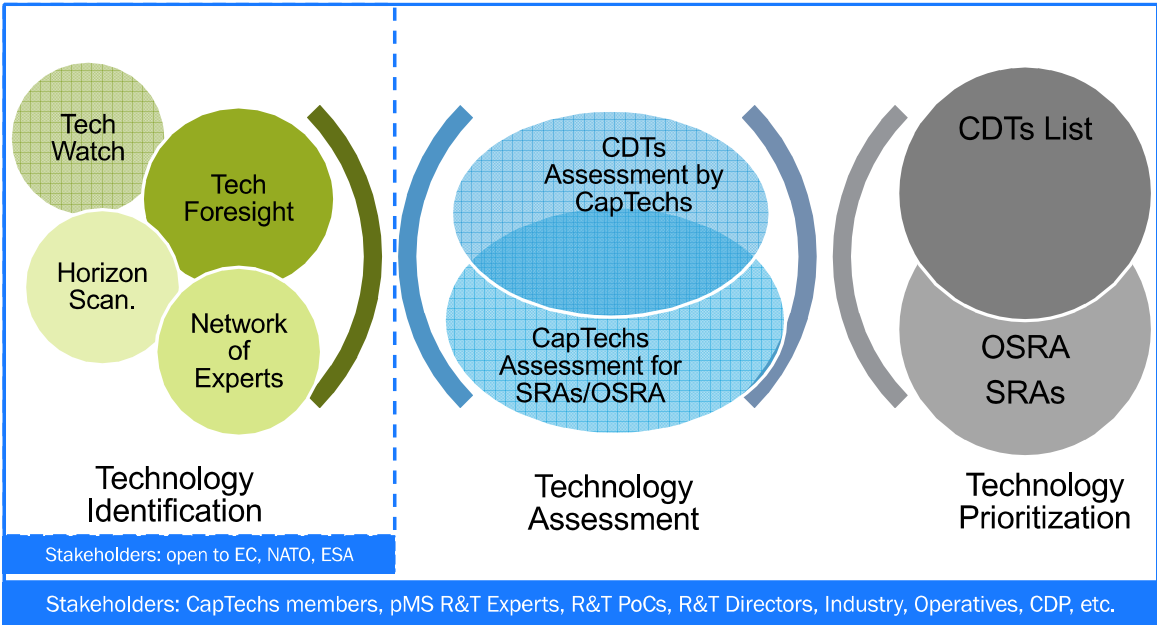
- Energetic Materials
- Lethality and Platform Protection
- Propulsion (rocket engines, ramjets, gun launch)
- Design Technologies for Platforms and Weapons
- Sensor Systems
- Weapons (Missiles and Mines)

PROJECTS/PROGRAMMES:

- Munition-Life Management [MLM]
- Guided Munitions Mission Abort System [MAS]
- Energetic Materials Towards an Enhanced European Capability [EMTEEC]
- Reduced Sensitivity Energetic Materials for the Higher Performance of the Inertial Confinement [RSEM]
- Additive Manufacturing Techniques for Energetic Materials [AMTEM] – under preparation



Comprehensive R&T Planning to support pMS



Strategic Research Agenda (SRA)

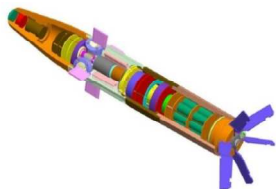
Member States R&T Directors task (2008):

- to develop **Strategic Research Agenda (SRA) for each EDA CapTech**
- **corresponding technological roadmaps**

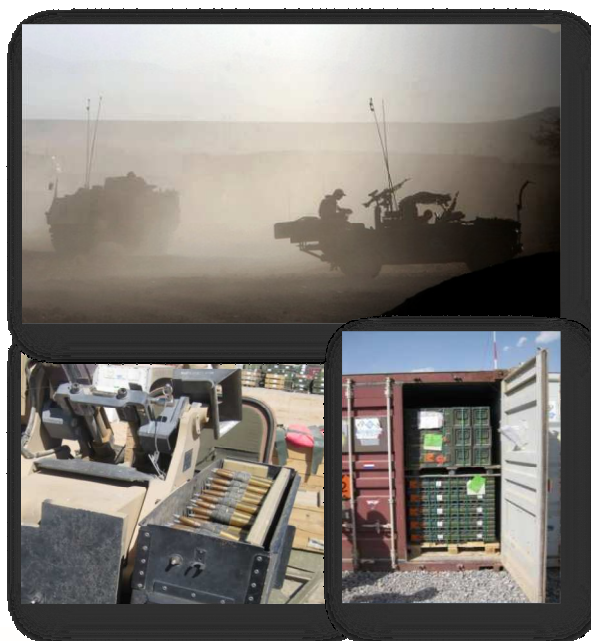
CapTech AMMO SRA aims to provide:

- **strategic guidance**
- clear **technological roadmap** for developing future technologies

encompassing Member States views and ambitions concerning EMM research.



Munition Life Managemet [MLM]



TNO innovation
for life



MBDA
MISSILE SYSTEMS



CapTech AMMO
It's more than rocket science



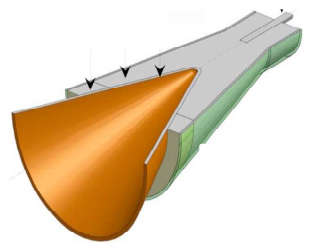
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Reduced Sensitivity Energetic Materials (RSEM - HPIC)



Energetic Materials Towards an Enhanced European Capability



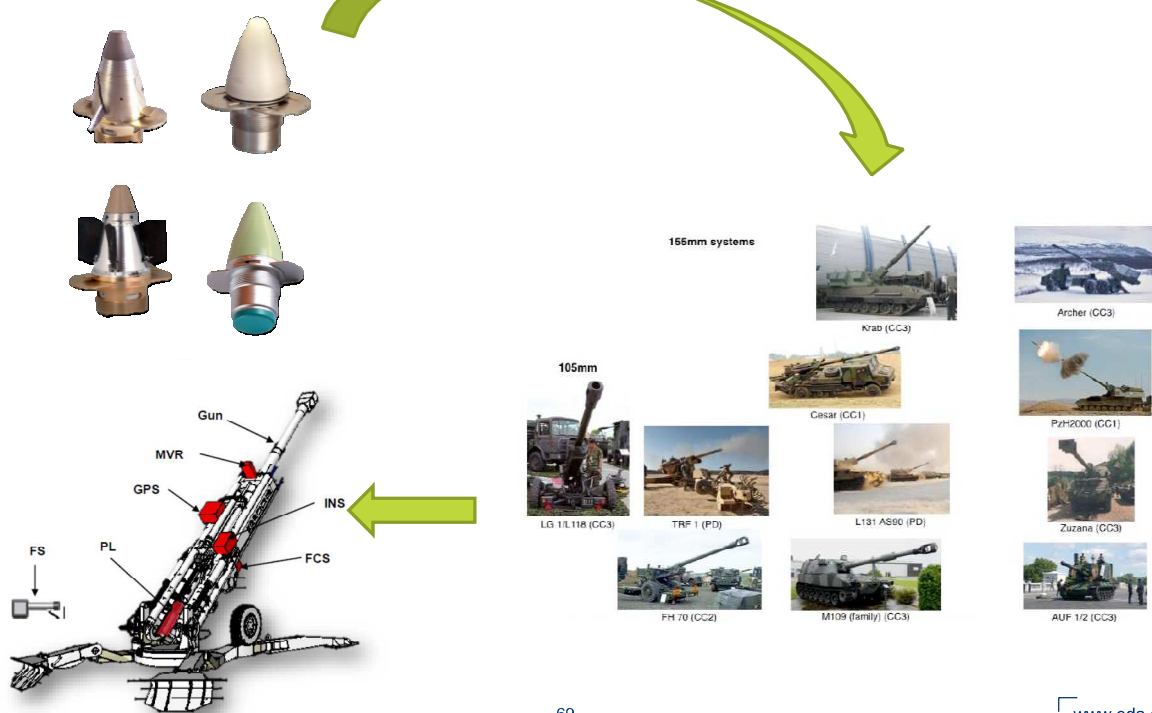
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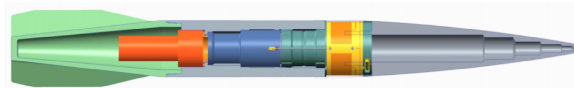
CCF Integration with Artillery Systems in EU EDA Study



CapTech Guidance
& Control

**CAPABILITY
DEVELOPMENT
PLAN (CDP)**

Collaborative Data
Base (CODABA)



CapTech Ground
Systems



ENNSA

CapTech Materials
& Structures



Land Programmes

Preparatory Action

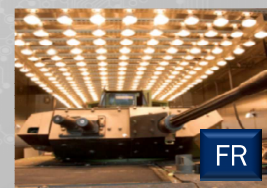
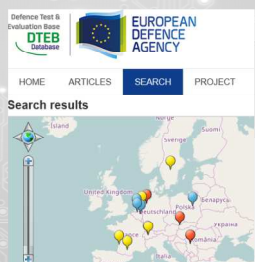


DTEB and ENNSA

DTEB – ENNSA EUROPEAN APPROACH TO MAKE FUTURE DEVELOPMENTS SAFER

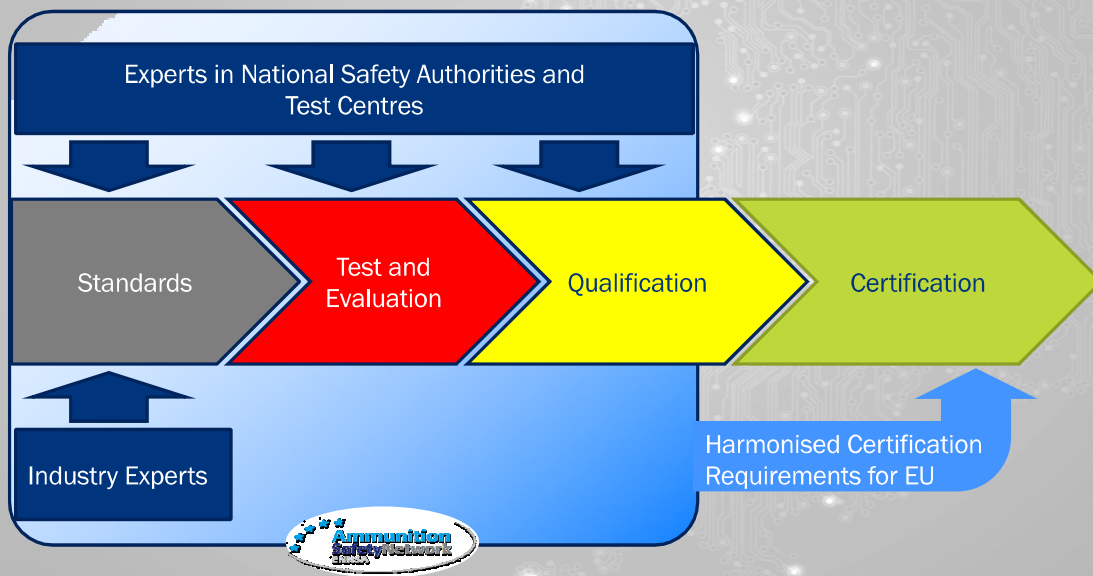


EUROPEAN NETWORK FOR AMMUNITION SAFETY



And more...

ROAD TO HARMONISED CERTIFICATION



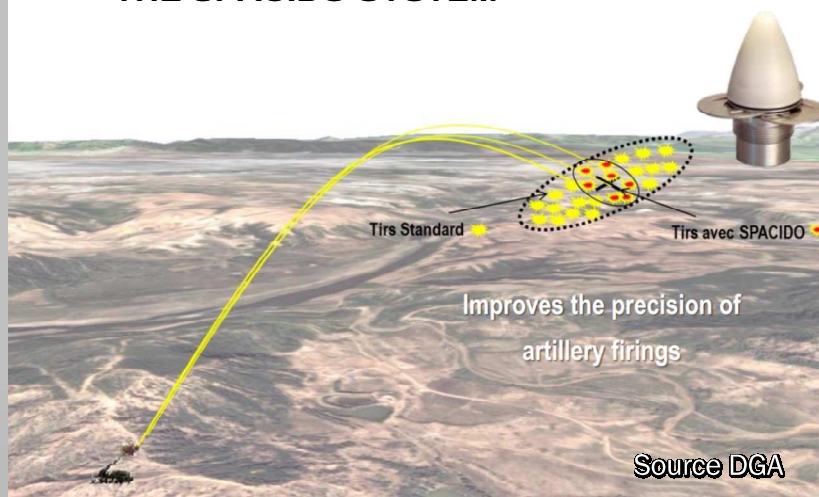


HOW IT WORKS



CONCRETE EXAMPLE SENSOR FUSE, WHERE TO TEST?

THE SPACIDO SYSTEM



Where to test?

TEST IN THE OWN EUROPEAN HOUSE

TEST ARRANGEMENT

TEST ARRANGEMENT

APPLYING THE
GENERAL PROVISIONS FOR APPLICATION TO AD HOC TEST PROJECTS AND
PROGRAMMES FOR THE MUTUAL USE OF GOVERNMENT TEST FACILITIES AND
COOPERATIVE TEST AND EVALUATION WITHIN THE SCOPE OF ARTICLE 20 OF
THE COUNCIL DECISION 2011/411/CFSP OF 12 JULY 2011
DEFINING THE STATUTE, SEAT AND OPERATIONAL RULES OF THE EUROPEAN
DEFENCE AGENCY AND REPEALING JOINT ACTION 2004/551/CFSP

SEARCHING

- Djibouti
- South Africa
- Sweden (DTEB Member State)

Final choice : Sweden → Discussions with FMV
(FMV = Swedish procurement agency)





EDA MEMBER STATES HAVE ACCESS TO THE DTEB.DATABASE



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DTEB STRATEGY

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ONE PAGE ABOUT NEW EU GLOBAL STRATEGY AND T&E STRATEGY

EUGS

DTEB Strategy

*...capacity for rapid
response...*

Large EU network of test centres
Quick EU T&E Collaboration

*...Defence cooperation
between Member States will
be systematically
encouraged...*

DTEB Consolidated framework;
DTEB Database linked to other
Tools (CODABA, CDP, EDSTAR)

*...invest more in
development cooperation...*

Smart EU T&E investments to cope
with future capability gaps

CONCLUSION



A close-up, low-angle shot of a jet engine's compressor section, showing the complex arrangement of compressor blades. The engine is part of a larger aircraft, with the tail fin visible on the right. The image is overlaid with a semi-transparent green grid pattern.

Thank you for your attention

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