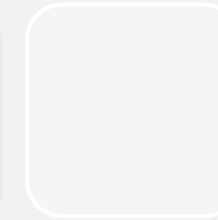


# Navy Technology

## FREMM EVOLution: The new technical challenges of the FREMM Programme



# AGENDA



World scenario and new threats

ITA – FR Cooperative Naval Armament Programmes FREMM – HORIZON

HORIZON Mid-Life Upgrade

FREMM EVO

Financial Aspects

Future Evolutions

# OCCAR

*Organisation Conjointe de Coopération en matière d'Armement*



*«A team that delivers»*

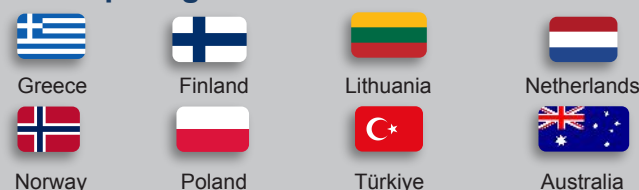


## International Organisation for the management of complex, cooperative defence equipment programmes

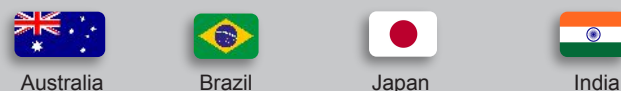
### Member States



### Participating States



### Observer States



ESSOR, HYDEF,  
HYDIS, MALE  
RPAS,  
MMPC Programmes are:



### MISSION

Our mission is to facilitate and manage cooperative European Armament Programmes through their life cycle, as well as Technology Demonstrator Programmes, to the satisfaction of our customers.

### VISION

Our vision is to be a centre of excellence, and first choice in Europe, for cooperative Defence Equipment Programmes managed on a through-life basis.

10/02/25

# OCCAR

*Organisation Conjointe de Coopération en matière d'ARmement*

## Programmes managed

	Participants																				
	Member States						Non-Member States														
	BE	DE	ES	FR	IT	UK	AU	BR	EE	EL	FI	JP	LT	NL	NO	PL	PT	RO	SE	TR	
A400M	X <sup>1</sup>	X	X	X		X														X	6
BOXER		X				X	X <sup>2</sup>						X	X							5
COBRA		X		X																	2
ESSOR		X	X	X	X						X				X	X			X <sup>3</sup>		8
FR-UK MMCM				X		X															2
FSAF-PAAMS (incl. CAMM-ER)				X	X	X															3
HORIZON (FREMM/Hrz MLU)				X	X																2
HYDEF	X	X	X												X	X					5
LSS				X	X			X <sup>2</sup>													3
LWT		X		X	X		X														4
MALE RPAS		X	X	X	X							X <sup>2</sup>									5
MAST-F				X																	1
MMPC			X	X	X					X					X						5
MUSIS				X	X																2
NVC	X	X																			2
PPA					X																1
REACT		X	X	X <sup>2</sup>	X									X <sup>2</sup>		X <sup>2</sup>		X <sup>2</sup>			7
TIGER		X	X	X			X <sup>2</sup>														4
U212 NFS					X																1
VBAE	X			X																	2
E-NACSOS <sup>4</sup>	X	X	X	X	X				X	X				X			X	X	X		11
GA10 <sup>4</sup>		X		X																	2
HYDIS <sup>4</sup>		X		X	X									X							4
WWGC <sup>4</sup>		X				X															2
Number of Programmes	5	14	8	18	13	5	3	1	1	2	1	1	1	4	3	3	1	1	3	1	

## Operational Budgets

CHAPTERS	OCCAR-EA ADMINISTRATIVE BUDGET (at outturn basis, indicative figures for 2025-2027 period)			
FIGURES IN KEUR	2024(*)	2025	2026	2027
A400M	1,871,056	1,845,709	1,946,712	2,092,168
BOXER	619,484	611,690	599,297	417,293
COBRA	21,701	19,698		
ESSOR (OC1+NC+MIDS)	21,841	1,522		
HYDEF	37,215	9,999		
HORIZON (FREMM/HRZ MLU)	448,669	587,252	449,456	349,003
FSAF-PAAMS + CAMM-ER	1,121,437	1,060,700	995,819	842,152
LSS	243,534	460,915	410,078	364,956
MALE RPAS (STAGE 2)	630,638	845,278	800,589	888,872
MAST-F	9,884	62,992	94,000	69,387
MMCM	115,698	33,027	17,200	26,588
MMPC	37,075			TBC
MUSIS	8,386	5,491	5,673	5,673
SMALL PROG PD (NVC, LWT, REACT, VBAE)	Commercial sensitive			
PPA	402,789	168,406	134,023	28,084
TIGER	707,434	506,673	725,756	547,356
U212-NFS	186,500	253,699	187,074	211,944
TOTAL	6,483,280	6,473,051	6,365,677	5,843,476

\* OB figures, approved or provisional as of 01/01/2024

# AGENDA



World scenario and new threats

ITA – FR Cooperative Naval Armament Programmes FREMM – HORIZON

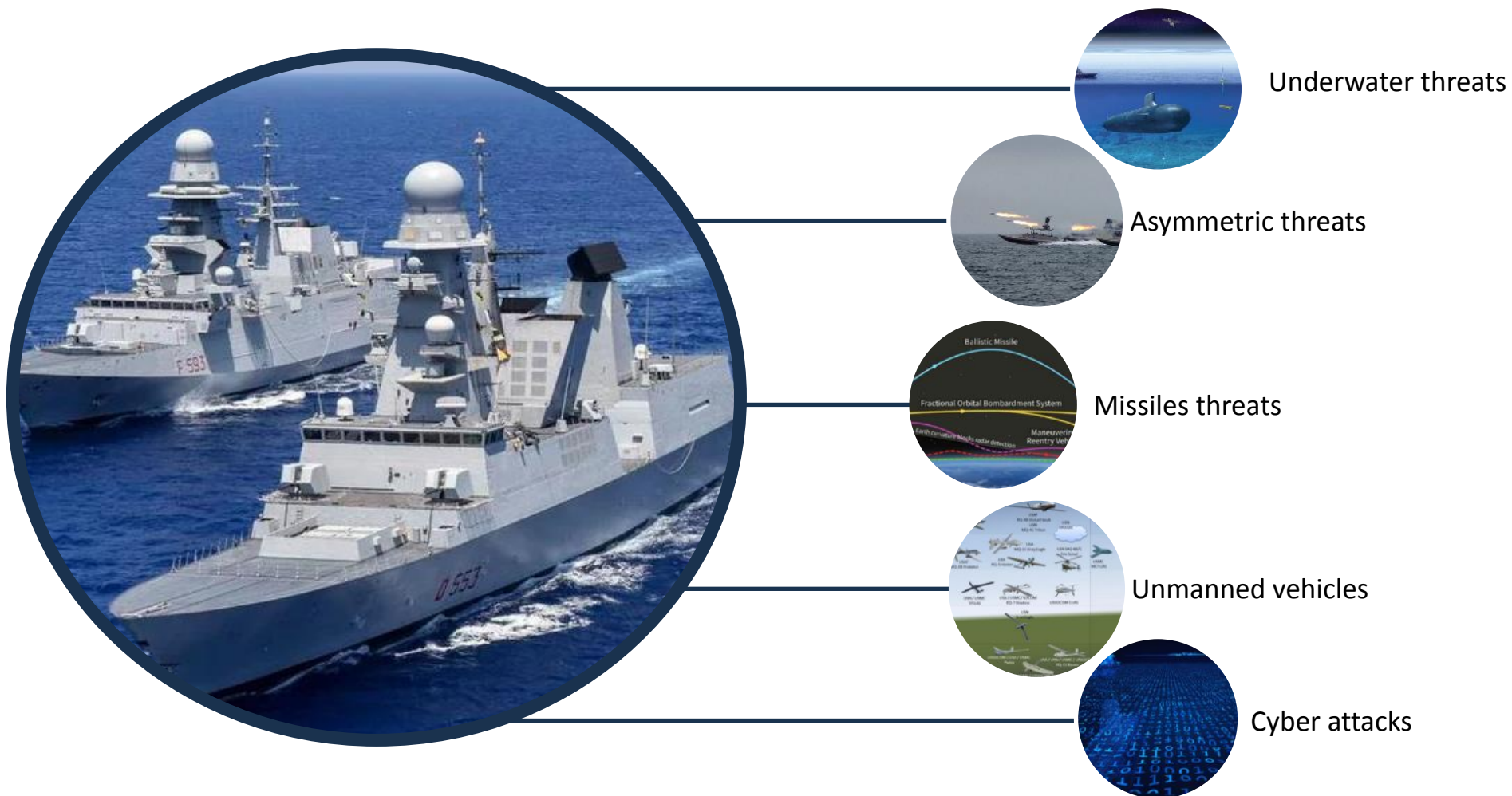
HORIZON Mid-Life Upgrade

FREMM EVO

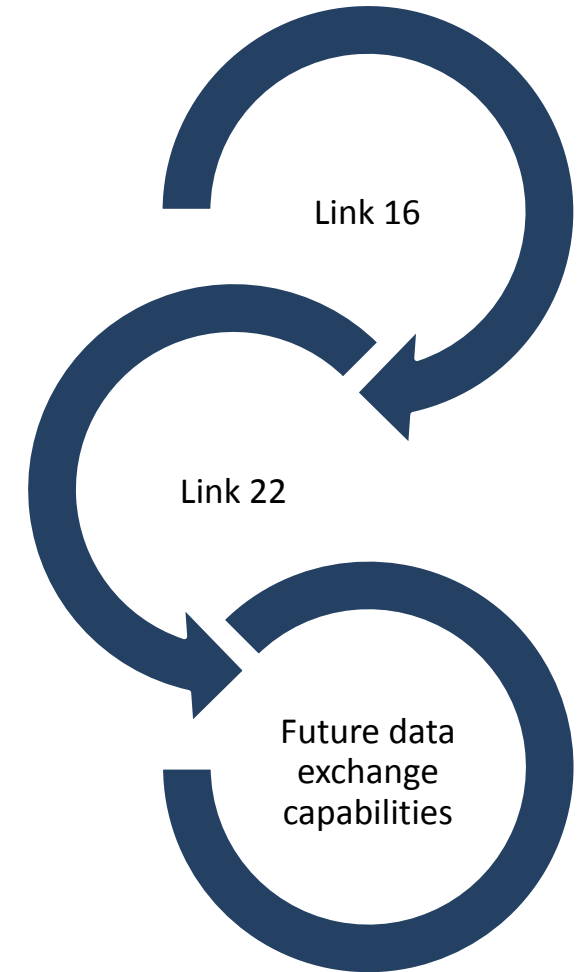
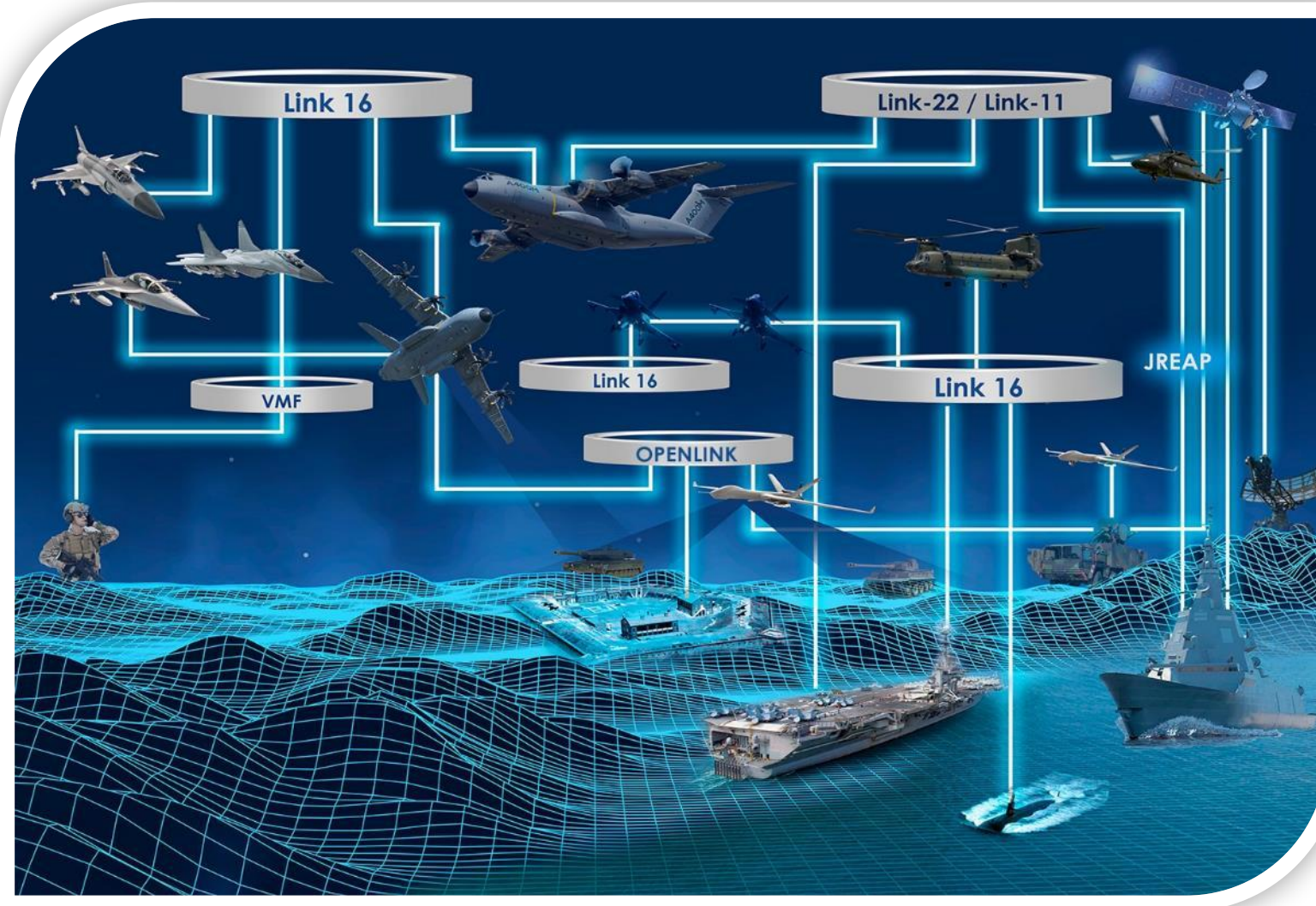
Financial Aspects

Future Evolutions

# World Scenario and new threats



# Interoperability between Navies



# AGENDA



World scenario and new threats

**ITA – FR Cooperative Naval Armament Programmes FREMM – HORIZON**

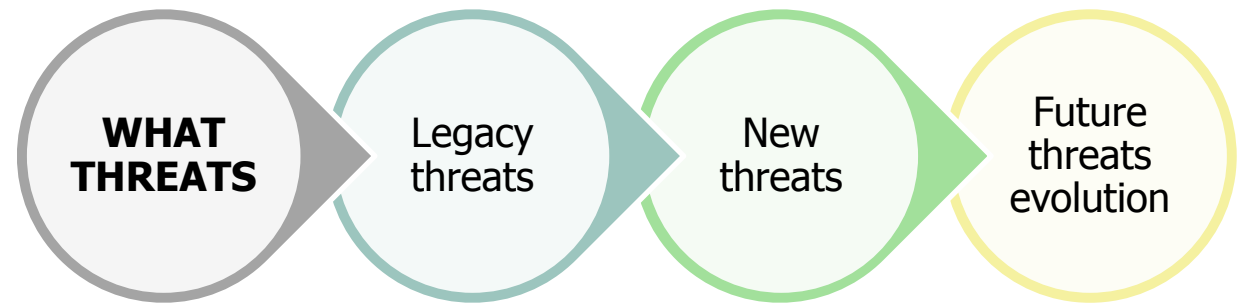
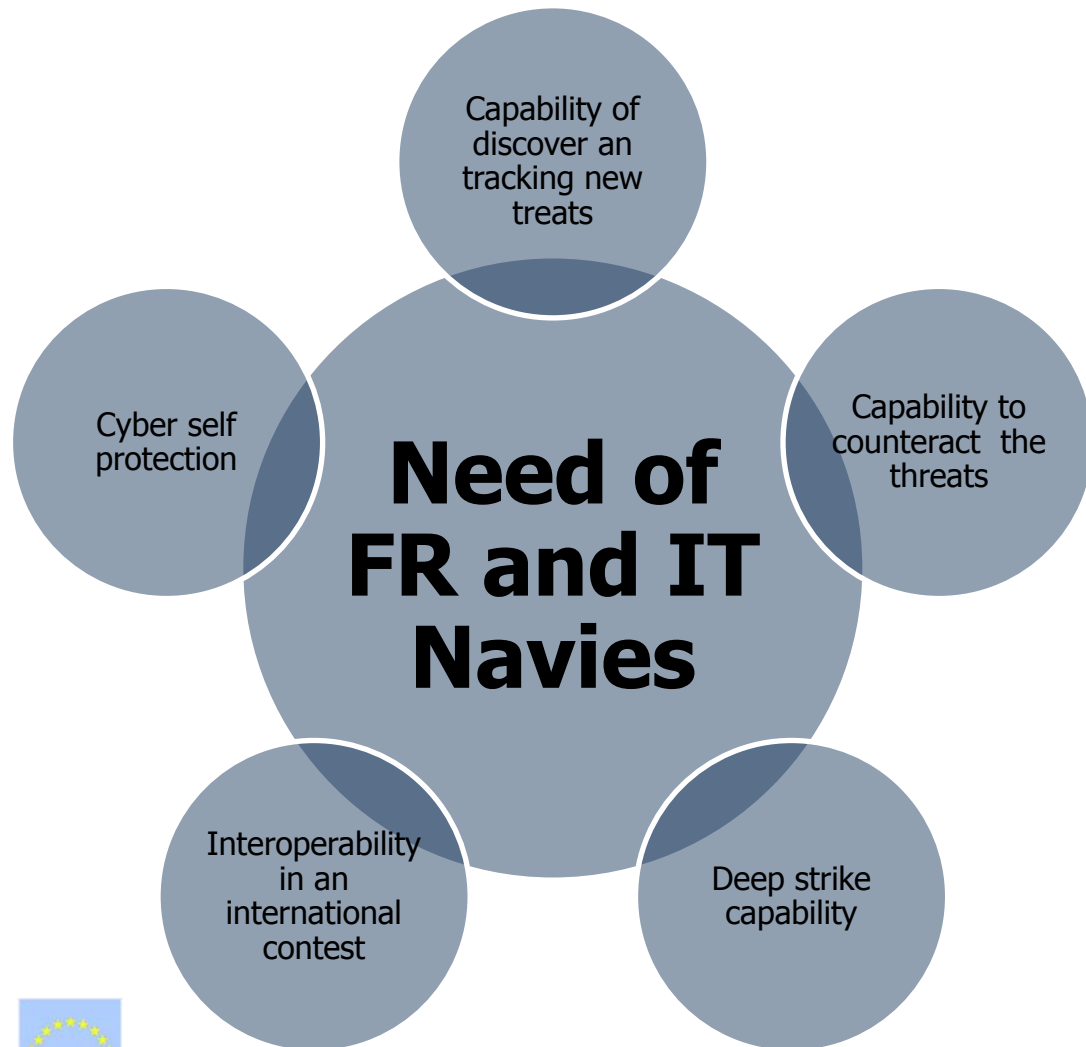
HORIZON Mid-Life Upgrade

FREMM EVO

Financial Aspects

Future Evolutions

# ITA – FR Cooperative Naval Armament Programmes FREMM – HORIZON



# AGENDA



World scenario and new threats

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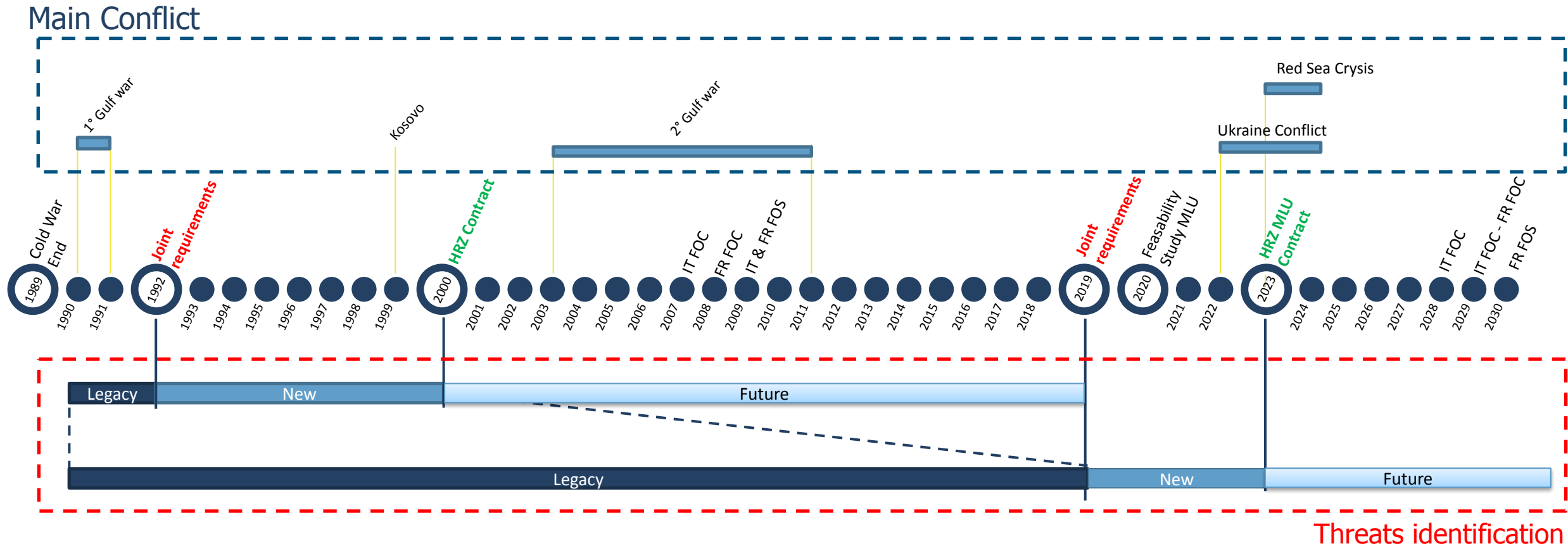
**HORIZON Mid-Life Upgrade**

FREMM EVO

Financial Aspects

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# HORIZON Class Units



# AGENDA



World scenario and new threats

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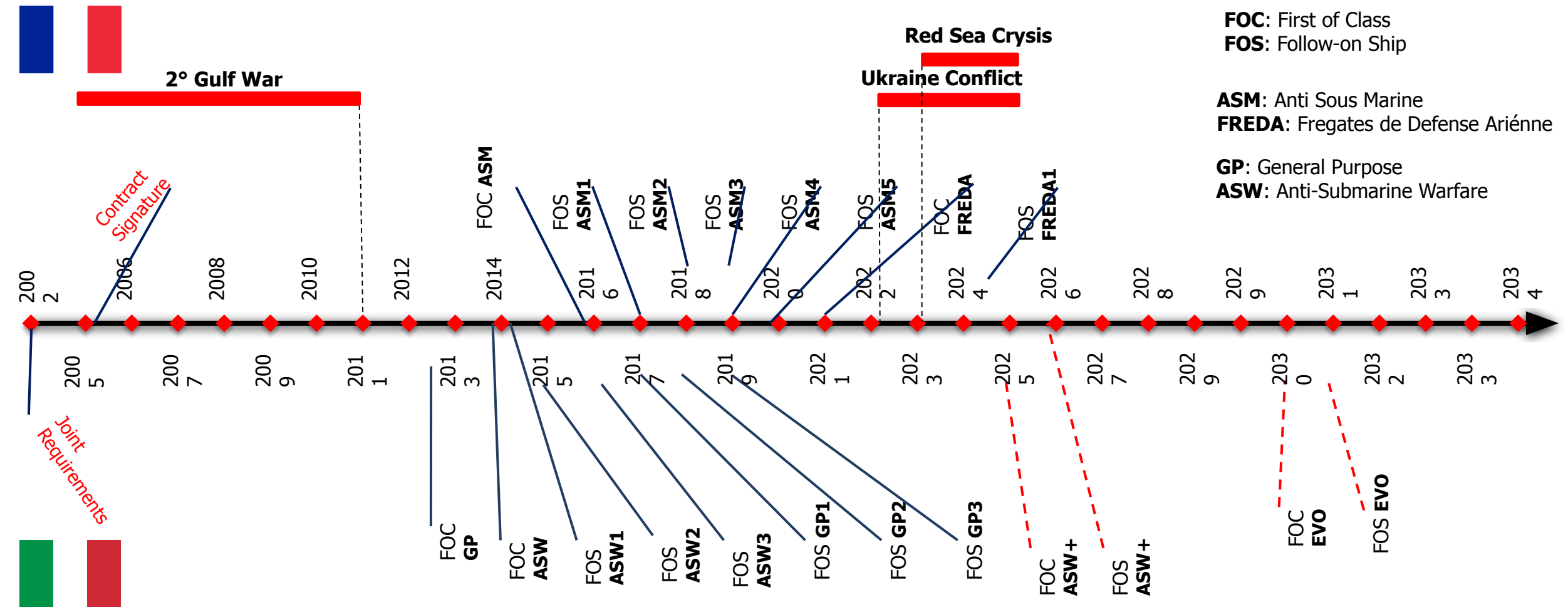
HORIZON Mid-Life Upgrade

**FREMM EVO**

Financial Aspects

Future Evolutions

# FREMM Class Units



# FREMM EVO Units

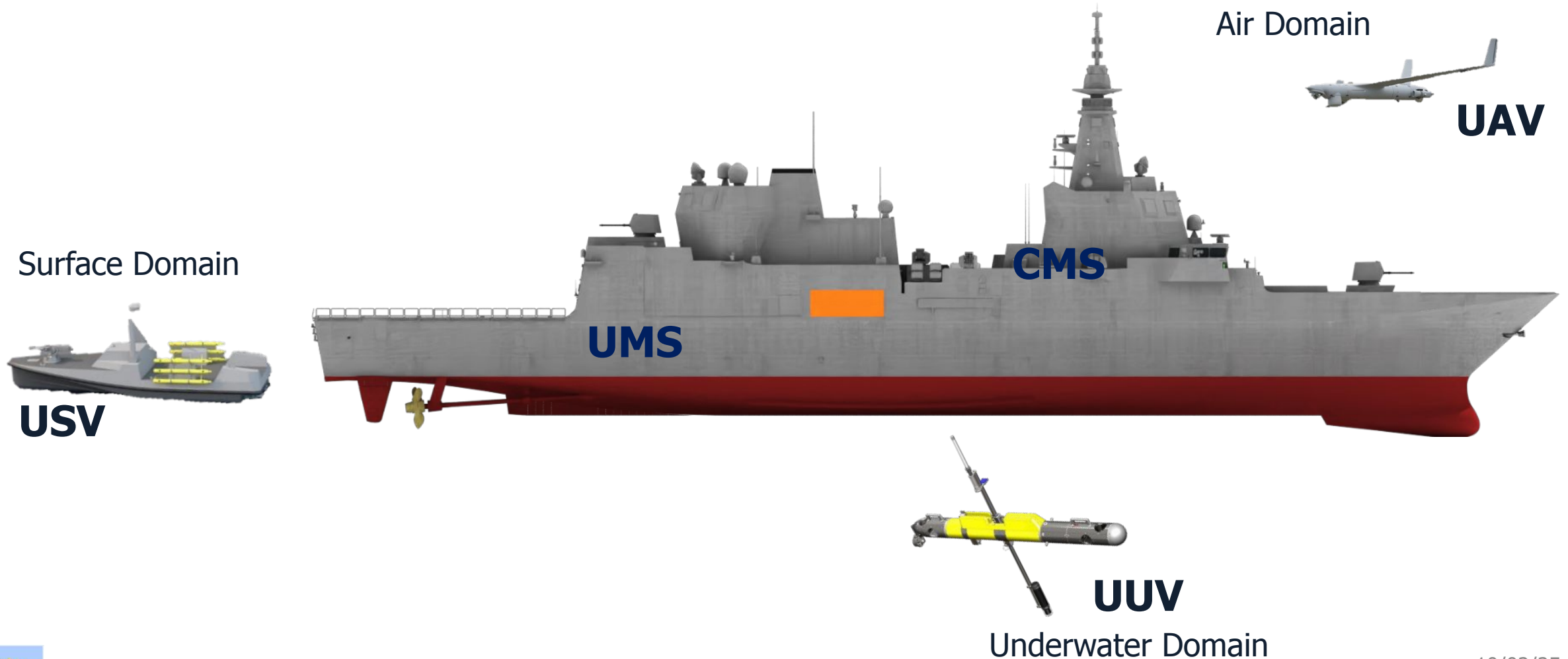


**FREMM – IT version**



**FREMM – EVO**

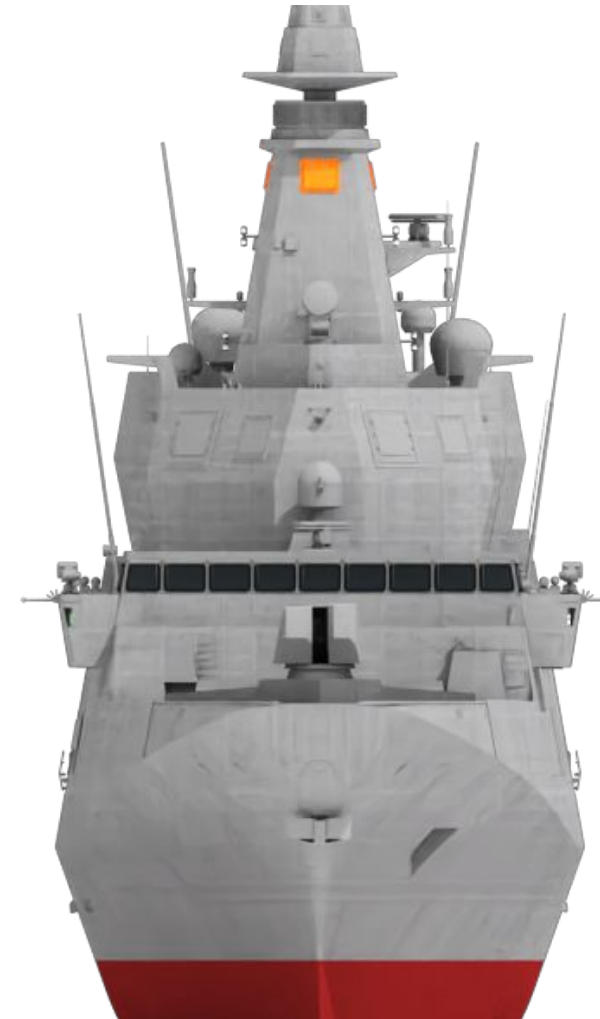
# FREMM EVO – UxV



# FREMM EVO C/UAS Capabilities

## Anti-Drone Radar

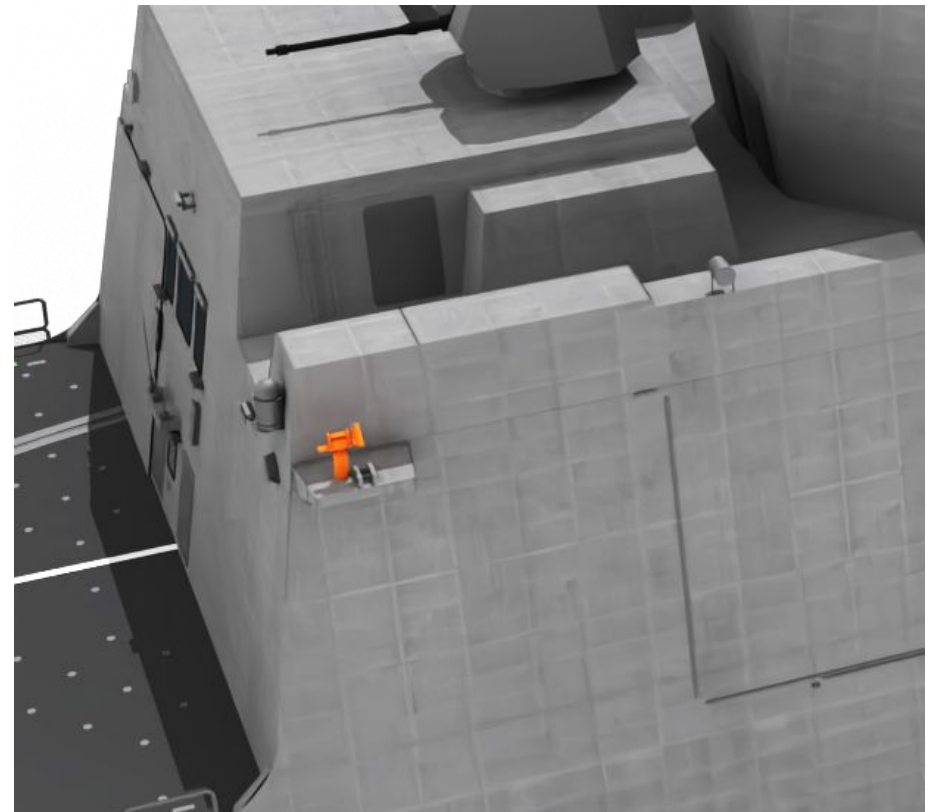
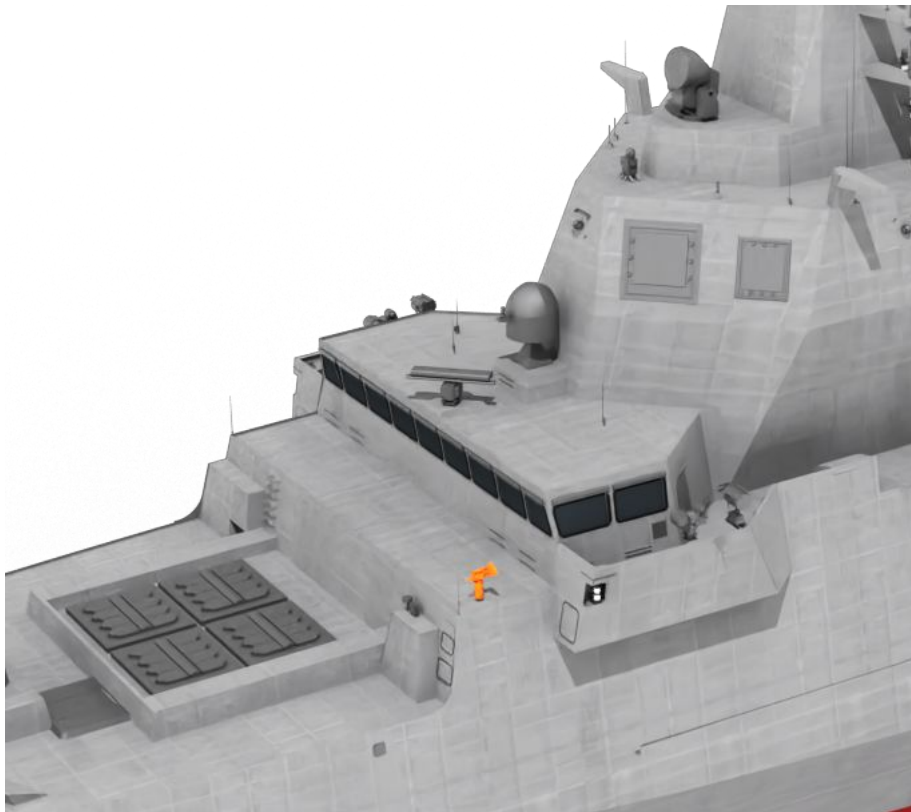
AI-equipped UAS detection and ranging specific sensor



# FREMM EVO C/UAS Capabilities

## C/UAS – Counter Unmanned Air System

AI-equipped soft-kill capability for C/UAS threats



# FREMM EVO - ADRIAN

## ADRIAN - Anti-Drone Interception Acquisition Neutralisation

AI-equipped counter-unmanned aerial system

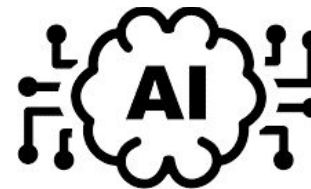
Radar

Radio  
Intercept

Electro-  
Optic

**Sensors**

Acoustic



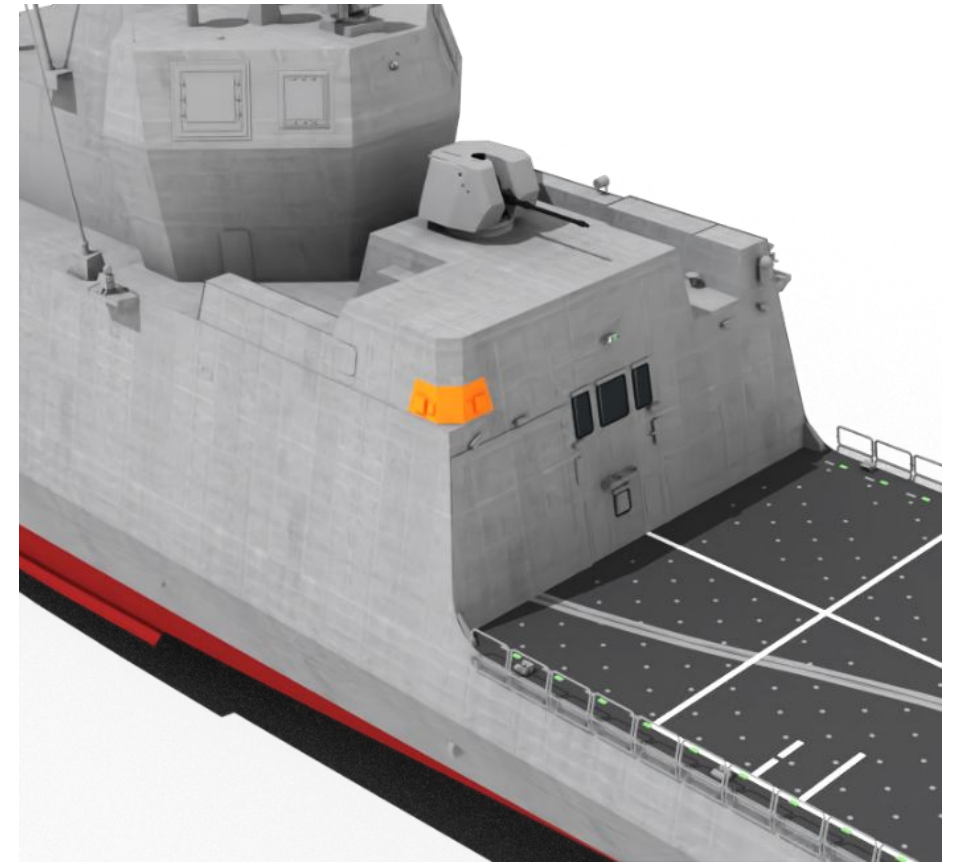
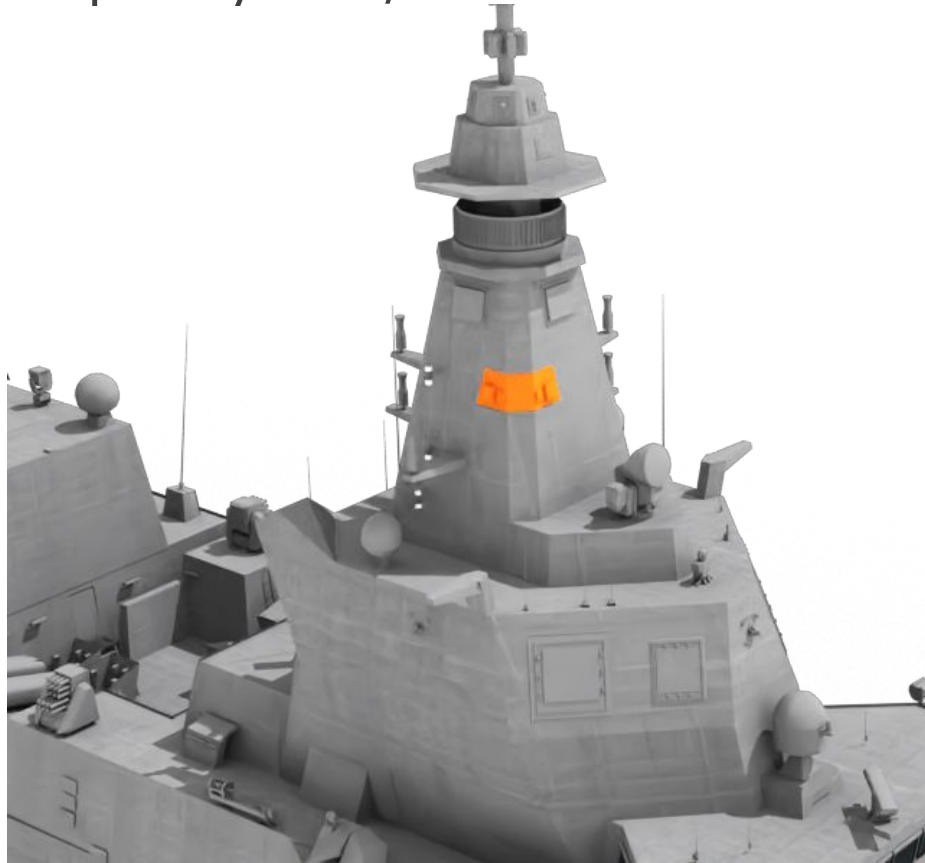
**REACTION**

Jammer

# FREMM EVO C/UAS Capabilities

## RECM (Radar Electronic Counter Measure)

Soft-kill capability for C/UAS threats



# FREMM EVO C/UAS Capabilities

**AI-equipped FCS (NA-30S) and DSS-IRST (Infra-Red Search and Track)**

**30 mm Gun – Lionfish**

**76/62 mm Gun STRALES – DART ammunition**

Hard-kill capabilities for C/UAS threats

Small Caliber GUNS



30mm

New capability for asymmetric surface threats, helicopters and drones, thanks to Air Burst Munition

**Lionfish**

Multi Sensor Target Indicator System



NA 25



NA 30

New Dual Band Radar which combines high tracking accuracy with improved range performance

76/62 Gun  
(Strales and Super Rapid)



Light weight, rapid-fire naval gun providing unrivalled performance and flexibility in any air defence and antisurface role, even with with DART guided ammunition in its Strales version.



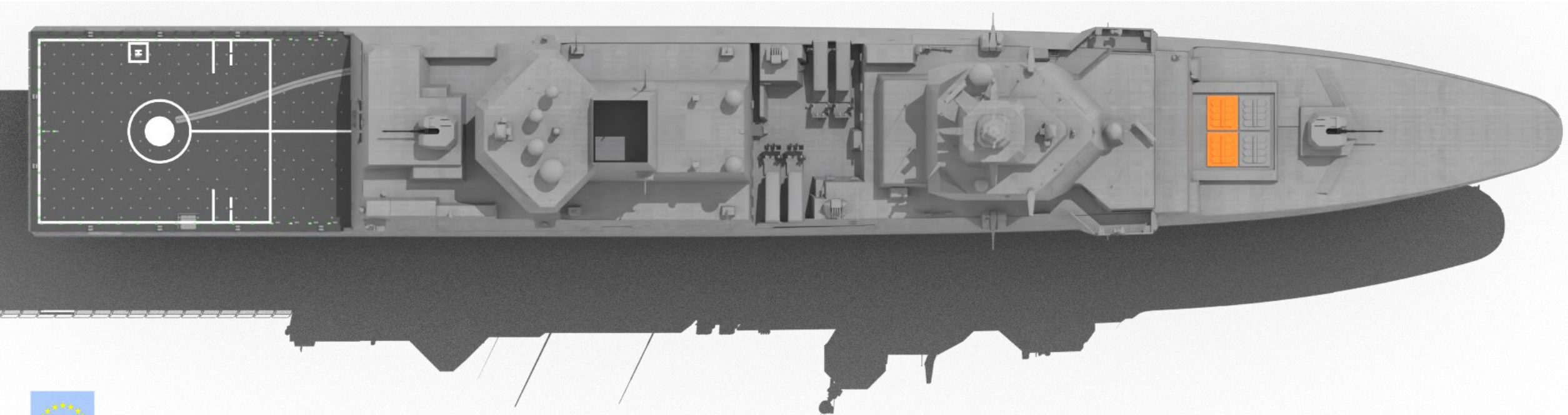
76mm Ammo with MW fuze

Strales Ammo

76mm Vulcano

# FREMM EVO ADDITIONAL Capabilities

**Deep-Strike Capability acquisition through cooperation activities between IT and FR MoD**



# AGENDA



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FREMM EVO

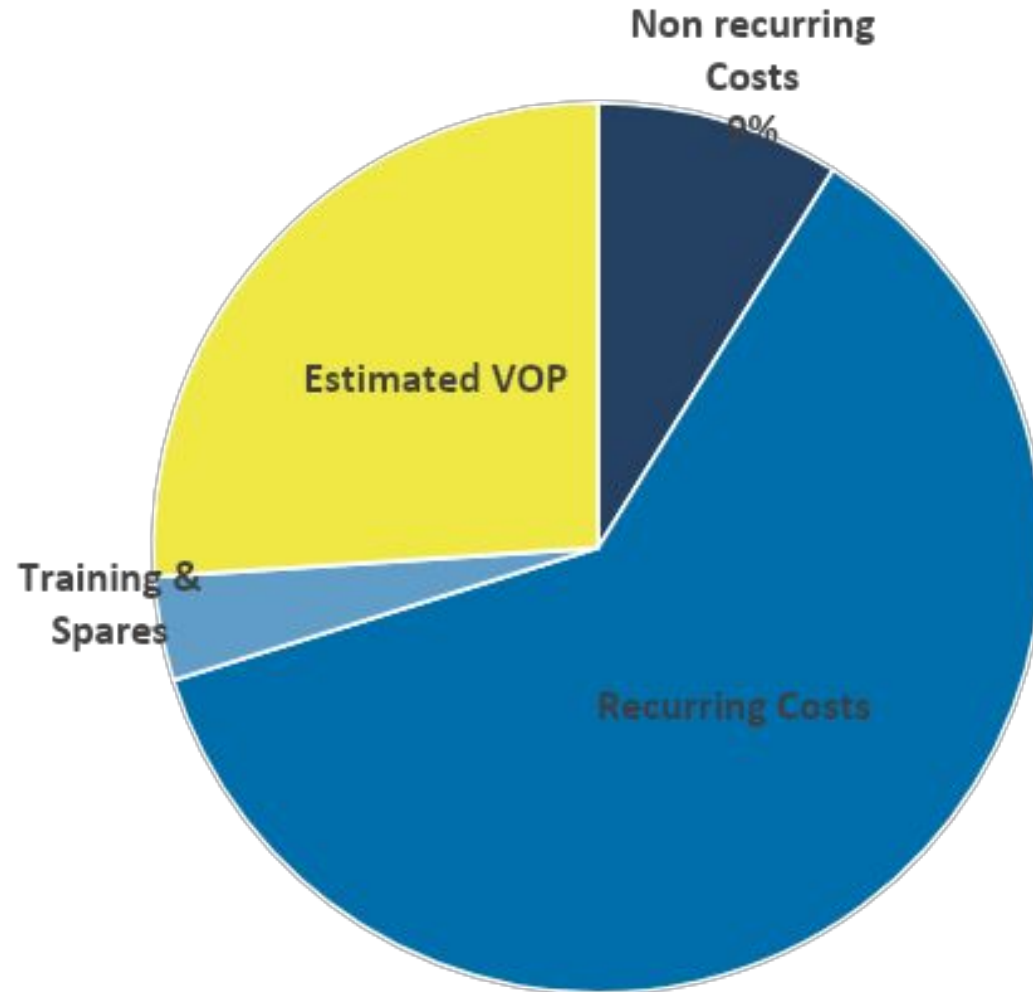
**Financial Aspects**

Future Evolutions

# FINANCIAL ASPECTS

**FREMM EVO Units  
(Costs for each Unit)**

**Contract EC 03/2024**



# AGENDA



World scenario and new threats

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**Future Evolutions**

# FUTURE EVOLUTIONS



Underwater cables threats



Space Militarization



Hypersonic Missile threats

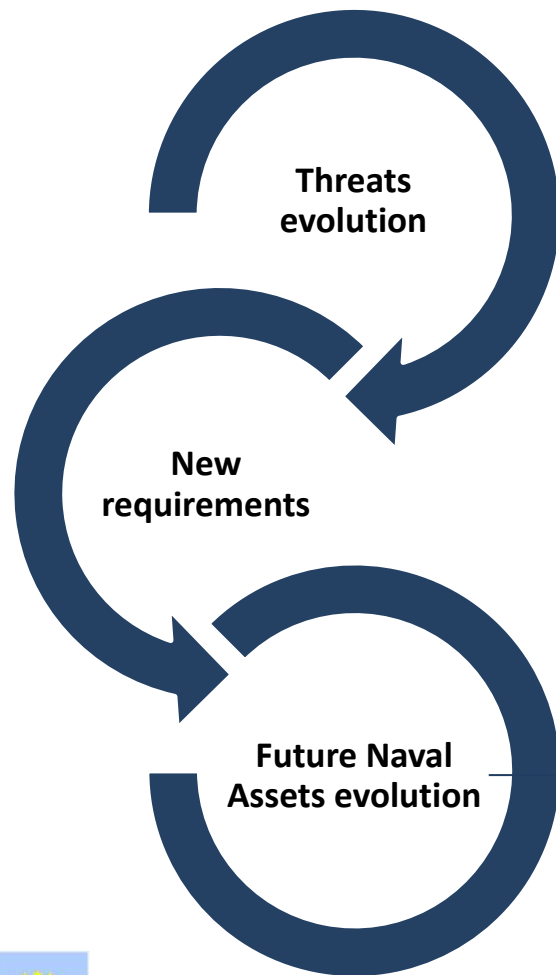


Autonomous Weapons Systems

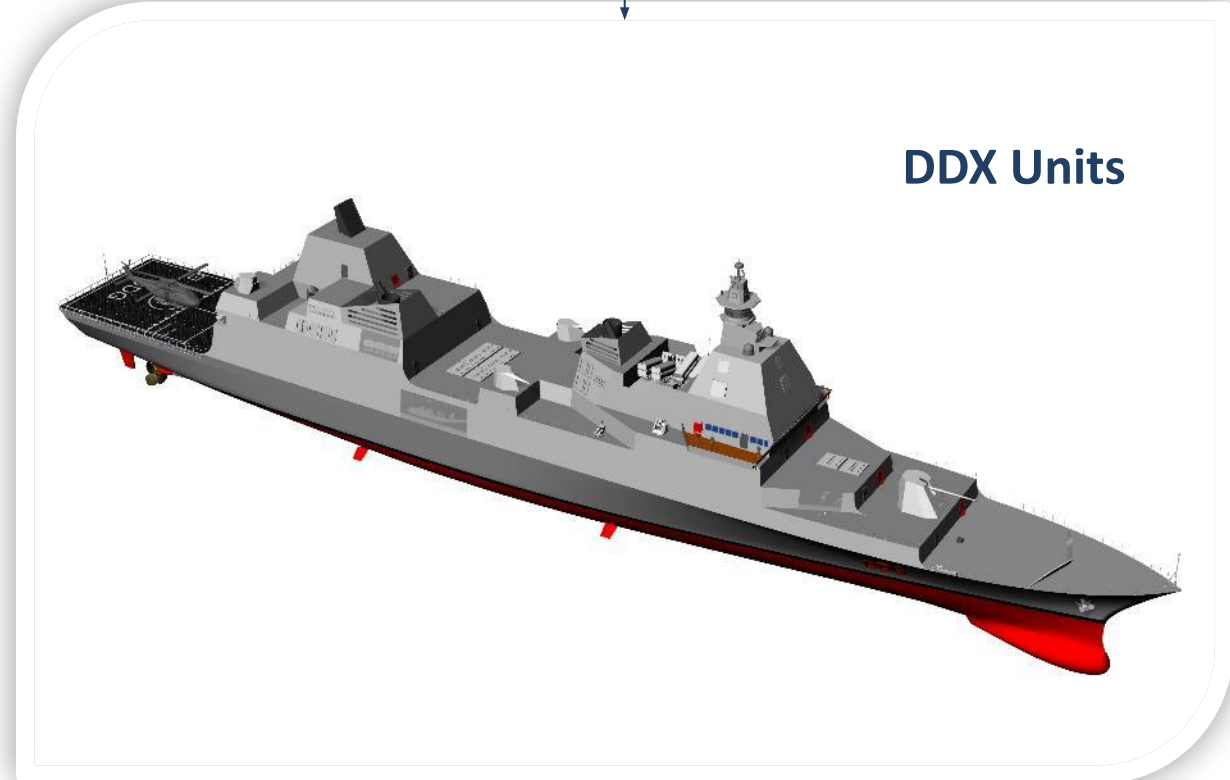


Advanced Cyber Warfare

# FUTURE EVOLUTIONS



Continue IT-FR cooperation for the creation of new Naval Units aligned with evolving threats



# QUESTIONS



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