

Naval Industry R&D Partnership Conference 2004

ONR Naval Expeditionary Warfare Department
Panel Discussion
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SEA POWER 21

- Homeland defense
- Sea / littoral superiority
- Theater air missile defense
- Force entry enabling

Sea Shield

- Expeditionary, multi-tiered, sensor and weapons grids
- Distributed, collaborative command and control
- Dynamic, multi-path and survivable networks
- Adaptive / automated decision aids
- Human-centric integration

Sea Trial

Innovation to the Warfighter ...
Rapid prototyping,
Concept development,
Coordinated experimentation

Preparing the Warfighter ...
The right skills,
In the right place,
At the right time

Sea Warrior

ForceNet

Sea Strike

Sea Enterprise

Resources to the Warfighter ...
Optimum resources allocation,
Increased productivity
Enhanced procurement

- Persistent intelligence, surveillance, and recon
- Time-sensitive strike
- Electronic warfare / information operations
- Ship-to-objective maneuver
- Covert strike

Sea Basing

- Enhanced afloat positioning of joint assets
- Offensive and defensive power projection
- Command and control
- Integrated joint logistics
- Accelerated deployment and employment

SEA POWER 21

CONCEPTS, CAPABILITIES & RESOURCES (AIR WARFARE INPUT TO FORCENET)

SEA STRIKE

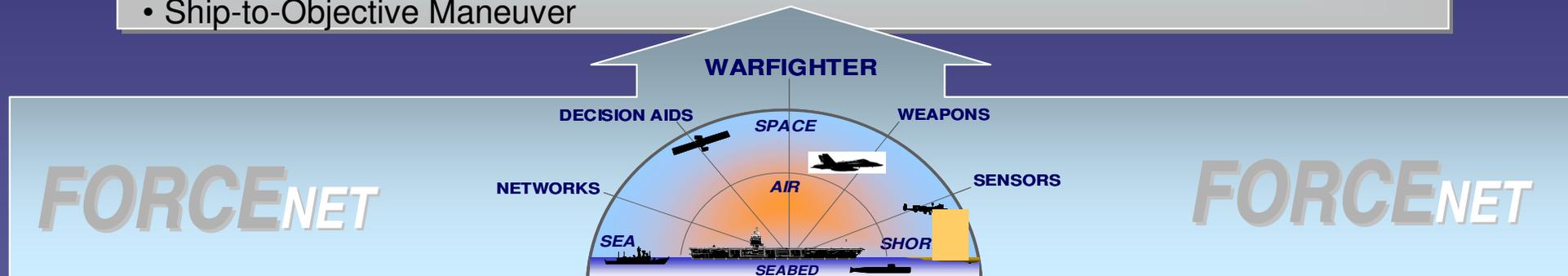
- Time Sensitive Strike
- Persistent Intelligence Surveillance & Reconnaissance (ISR)
- Information Operations
- Ship-to-Objective Maneuver

SEA SHIELD

- Theater Air and Missile Defense
- Littoral Sea Control
- Homeland Defense

SEA BASING

- Enhanced Sea-borne Positioning of Joint Assets
- Accelerated Deployment and Employment Time



NAVAIR ROLE

PLATFORMS

- CVNX
- AEA
- F/A-18C/D/E/F
- JSF
- UCAV-N
- E-2C RMP
- E-6B
- P3/MMA
- MH-60R & S

WEAPONS

- TOMAHAWK
- JASSM
- JSOW, AARGM/QB
- PJDAM, SDB
- HELLFIRE FOLLOW-ON
- ADDB/HSFD
- AIM-120
- AMRAAM P3I
- AIM-9X

NETWORKS

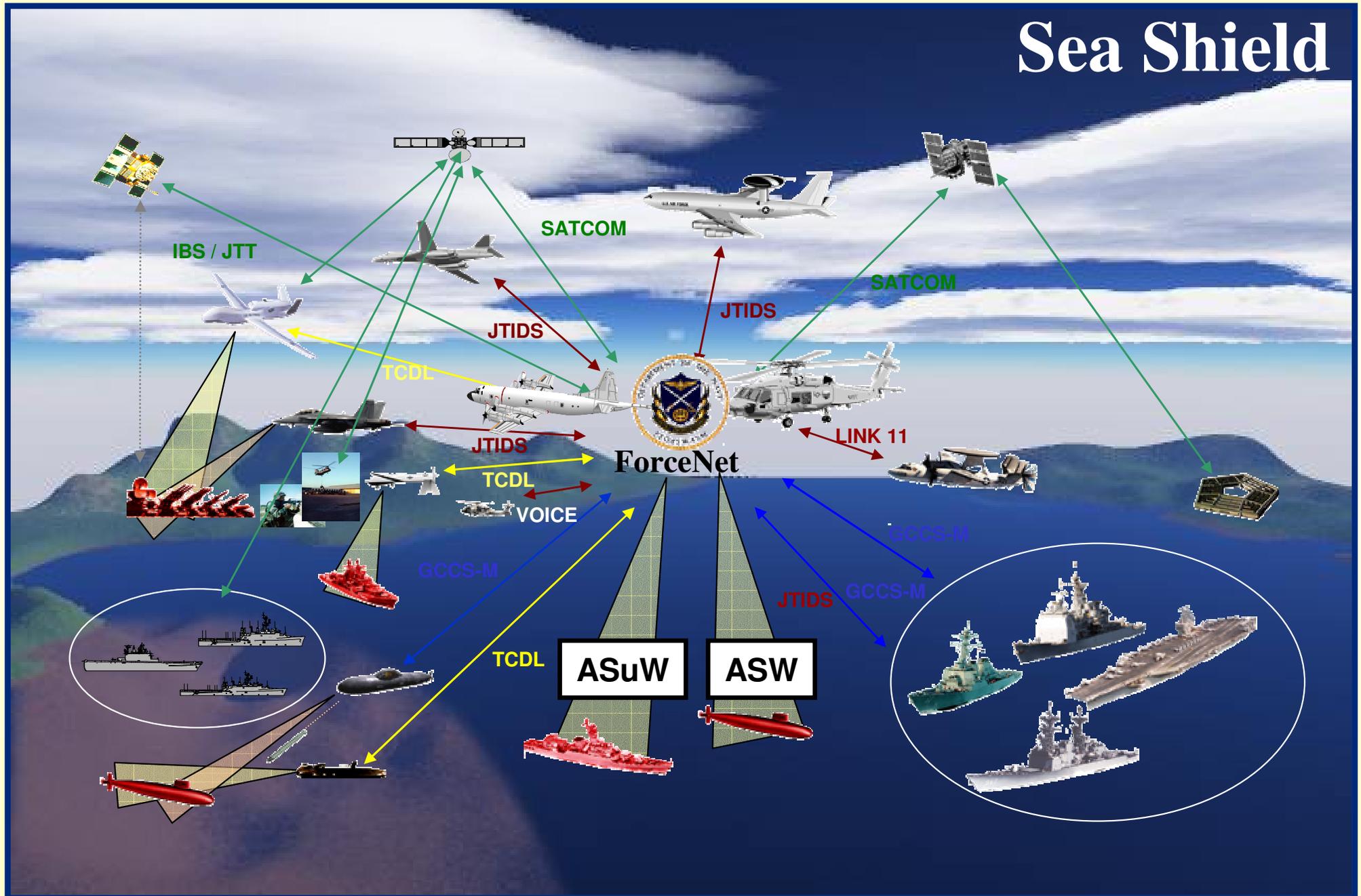
- LINK 16
- JSIP-FOLLOW ON
- CDL-N
- JMPS
- CEC/JCTN
- TBMCS
- CUP SENSOR GRID

SENSORS

- ATFLIR AESA PHASE II
- SHARP
- AEA DIGITAL SYS
- MMA MISSION SYS
- JMOD II
- MH-60R MMRS (ISAR/PD)
- RMP
- AQS-22
- ARPDD / CM / ADAR

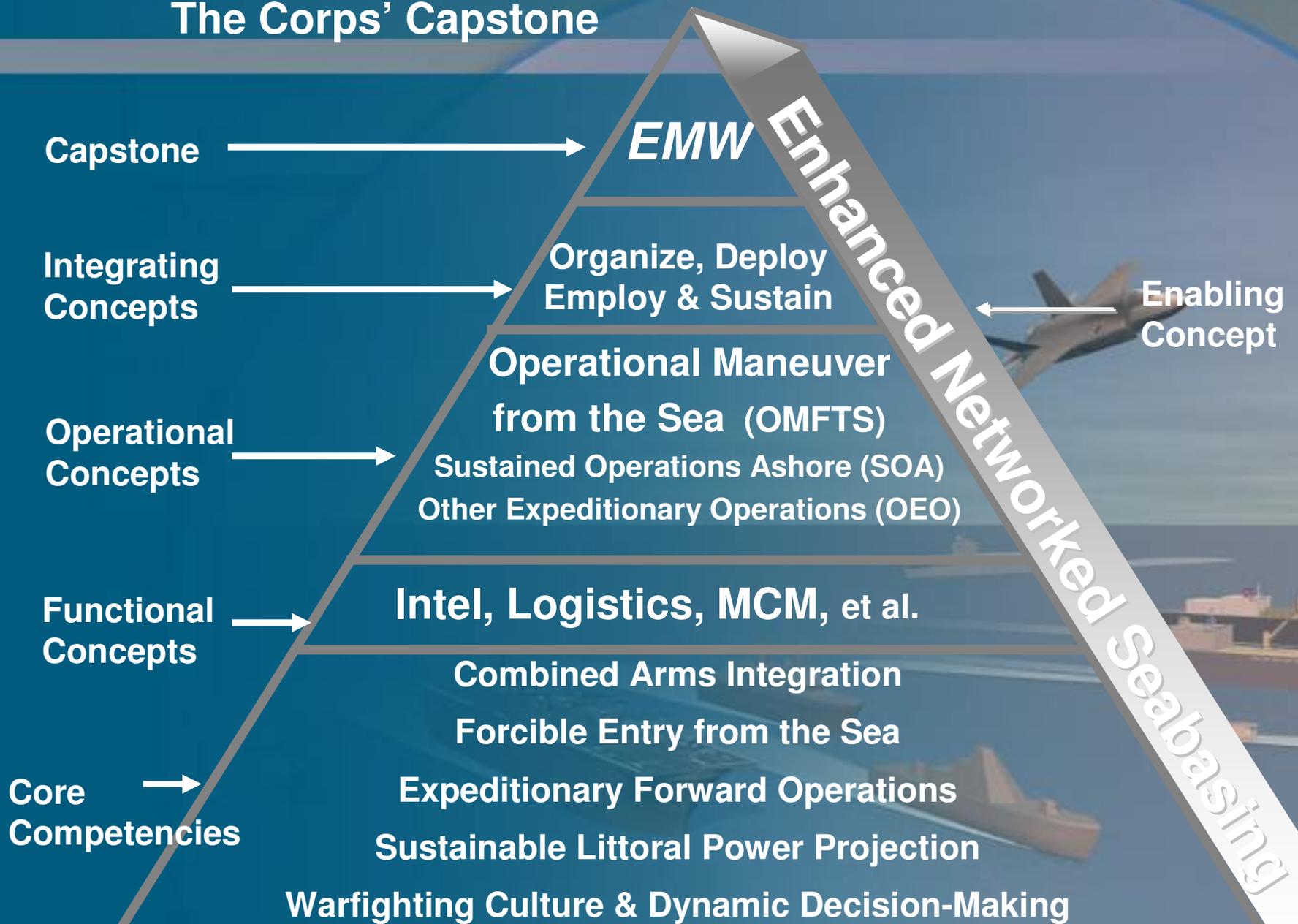
SEA POWER 21

Sea Shield

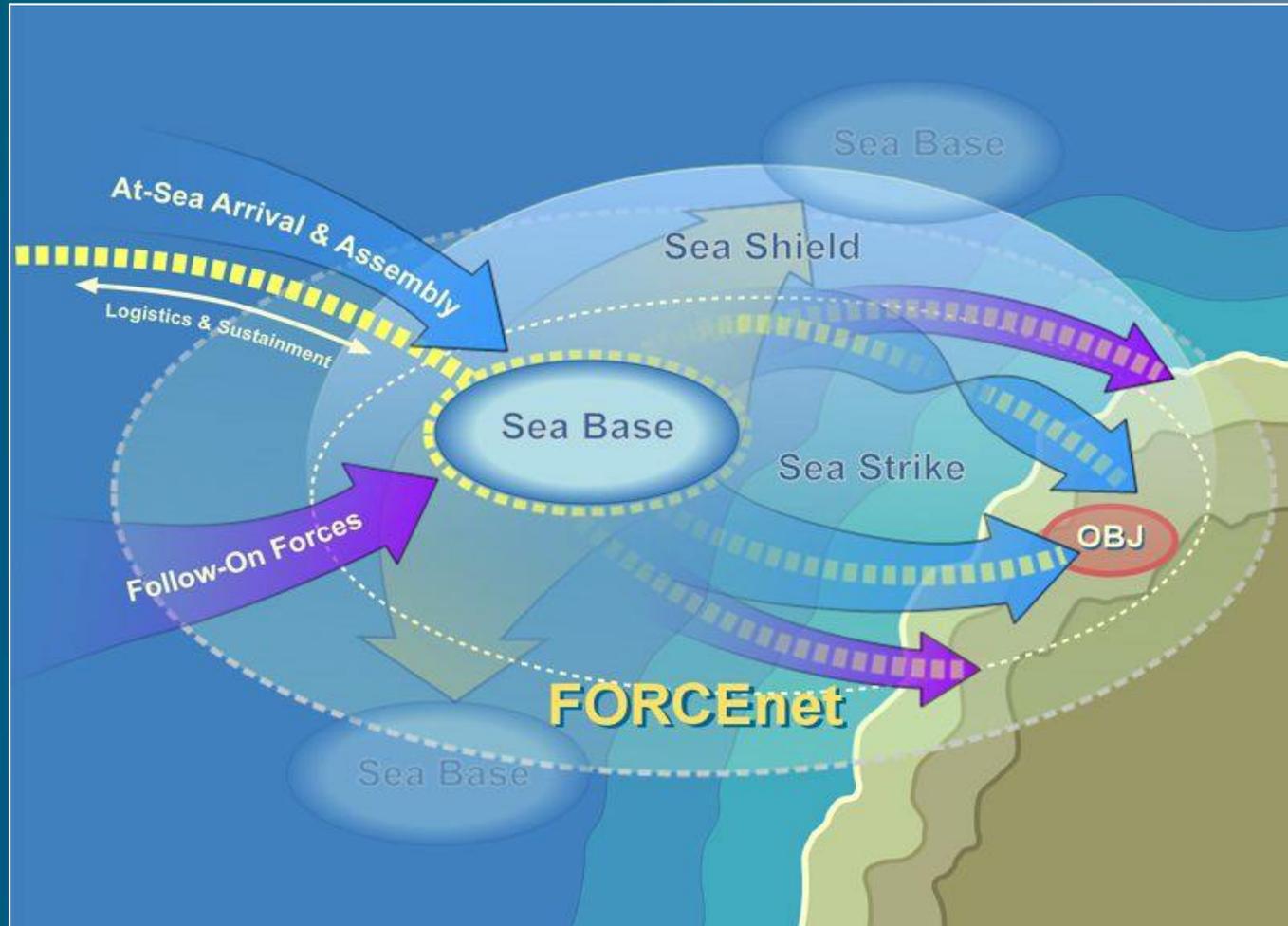


Expeditionary Maneuver Warfare

The Corps' Capstone



Sea Basing Cornerstone of Transformation



- Enhance ability to deploy, employ & sustain joint forces
- Exploit the secure and vast maneuver space of the sea
- Minimize vulnerabilities tied to bases ashore
- Reduces dependence on basing and over flight rights

DoN Rotorcraft S&T Priorities

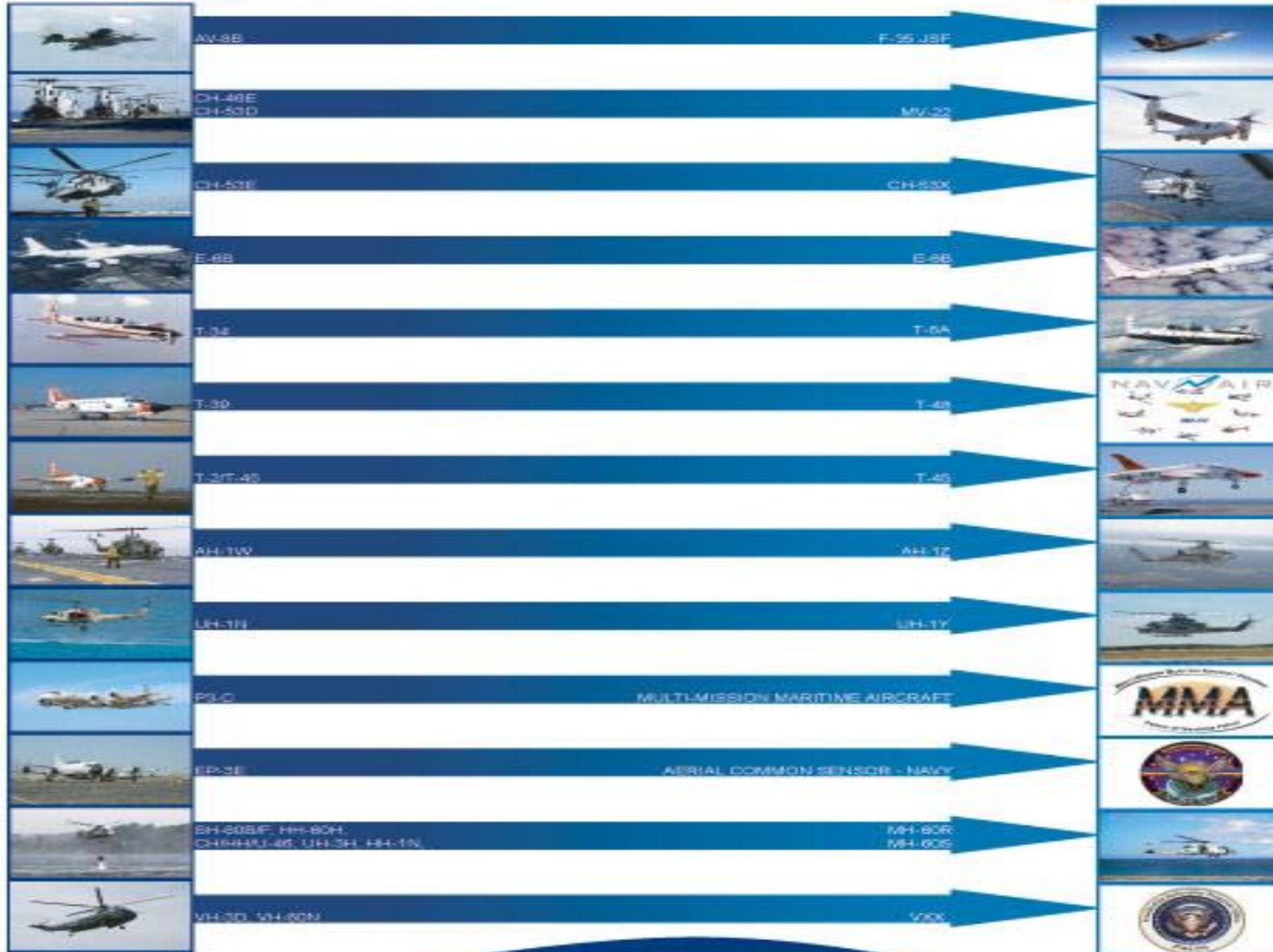
PEO (A), HQMC, OPNAV, ONR

	Near-Term (FY05 – FY09)	Mid-Term (FY10-FY15)	Far-Term (FY16-FY25)
Performance	<ul style="list-style-type: none"> •Weight Reduction •Light Electrical Power Storage, Generation and Control 	<ul style="list-style-type: none"> •Weight Reduction •High Lift Blades •Independent Blade Control •Engine & Drive Train 	<ul style="list-style-type: none"> •Weight Reduction
Survivability	<ul style="list-style-type: none"> •Signature Reduction (RF/IR/Visual) •Ballistic Lightweight and Flexible Armor •Non-Halon Fire Suppression 	<ul style="list-style-type: none"> •Signature Reduction (RF/IR/Visual) •Ballistic Tolerant Components & Structures •Reusable DCM (RF/IR/Visual) •Lightweight Crash Survivability crew / troop systems 	<ul style="list-style-type: none"> •Signature Reduction (RF/IR/Visual) •Reusable DCM (RF/IR/Visual)
Interoperability	<ul style="list-style-type: none"> •Conformal Antennas •Joint Blue Force Data Link 	<ul style="list-style-type: none"> •Miniaturized Avionics 	<ul style="list-style-type: none"> •Miniaturized Avionics
Operational & Support (O&S)	<ul style="list-style-type: none"> •Corrosion & Dust Protection •Manufacturing Cost Reductions •Vibration Reduction •Composite Damage Detection •IMD HUMS Analysis/Prognostics •Blade Erosion 	<ul style="list-style-type: none"> •Engine & Drive Train • Dynamic Component Reliability • Engine Durability Improvements •Manufacturing Cost Reductions •Composite Fuselages •Composite Damage Detection •Vibration Reduction •Blade Erosion 	<ul style="list-style-type: none"> •Manufacturing Cost Reductions •Composite Fuselages and Components •Vibration Reduction •Blade Erosion
Safety	<ul style="list-style-type: none"> •Wire Detection •Hands-off Take off and Landing System for dusty LZ operations 	<ul style="list-style-type: none"> •Work in progress 	<ul style="list-style-type: none"> •Work in progress



PEO(A) Roadmap

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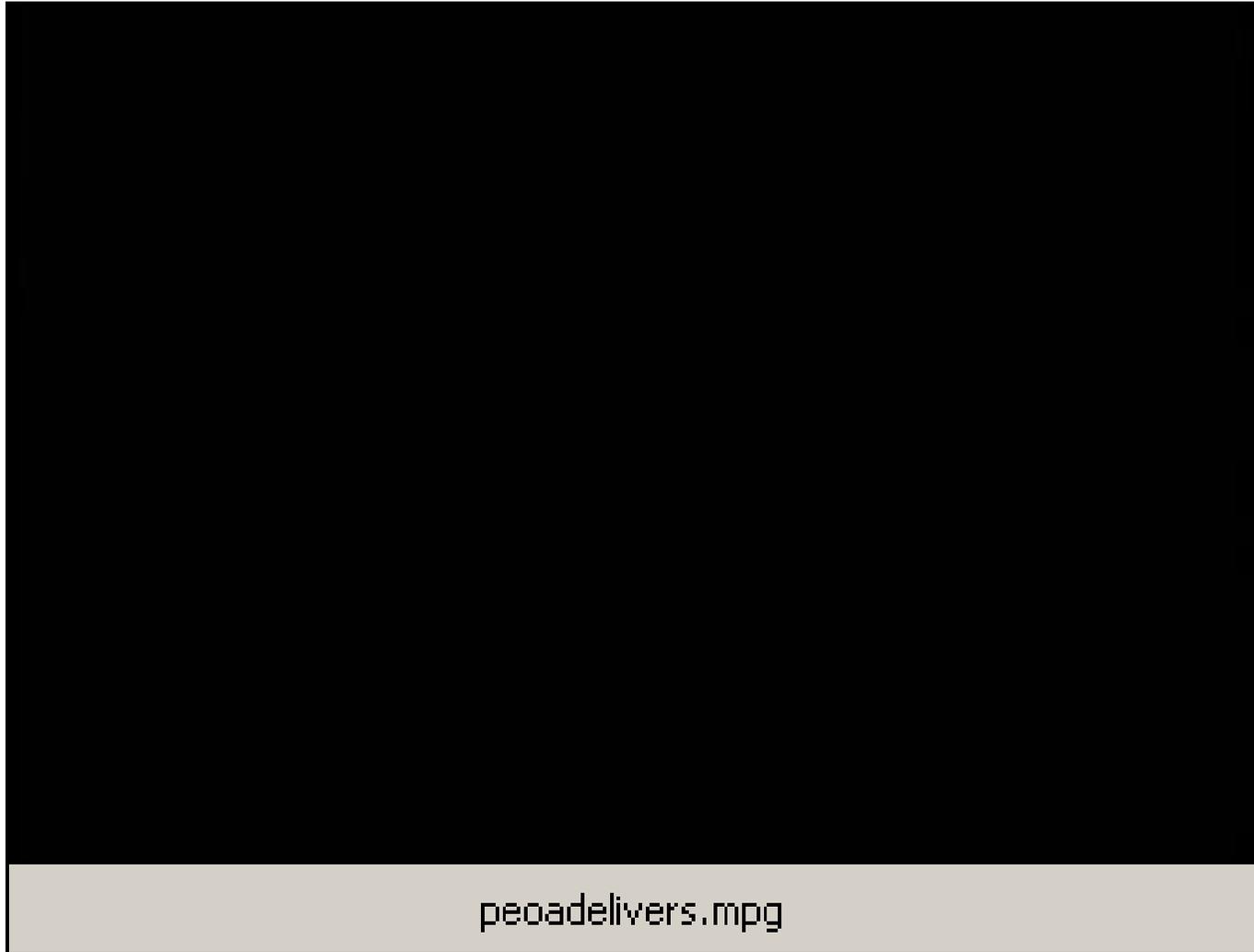


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PEO (A)

delivers ...



PEO (A) delivers ...