



SPECIAL OPERATIONS FORCES ACQUISITION, TECHNOLOGY, & LOGISTICS
EXPANDING THE COMPETITIVE SPACE

CAPT Randy Slaff, Program Executive Officer
MARITIME



Program Executive Office – Maritime

- PEO Opening Comments and Portfolio Overview
- PM Combat Diving
- PM Naval Special Warfare
- PM SOF Undersea Mobility
- PM Undersea Systems
- PM Surface Systems
- S&T and R&D Interests
- Open Forum Questions



Organizational Chart

CAPTAIN ROCKY RUSSELL



CCA
CCH
CCM
CCFLIR
SOCR
MPE

CAPTAIN RANDY SLAFF



CAPTAIN JONATHAN KIM



DDS
DCS
Technical Support



DCS



Combat Diving



SDV
UUV

COMMANDER SCOTT DELWICHE

MR JIM KNUDSON

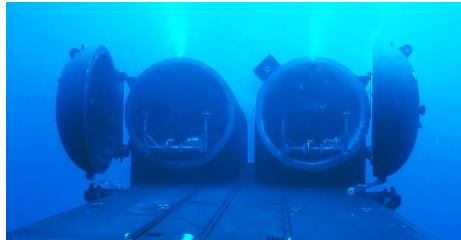
CAPTAIN BRIAN O'LAVIN

Program Executive Office Maritime (M)

UNDERSEA SYSTEMS



SEAL Delivery Vehicle MK 8



Dry Deck Shelter



SEAL Delivery Vehicle MK 11



Unmanned Underwater Vehicle



SOF Combat Diving



Dry Combat Submersible

SURFACE SYSTEMS



Combatant Craft Assault



Combatant Craft Heavy



Special Operations Craft - Riverine

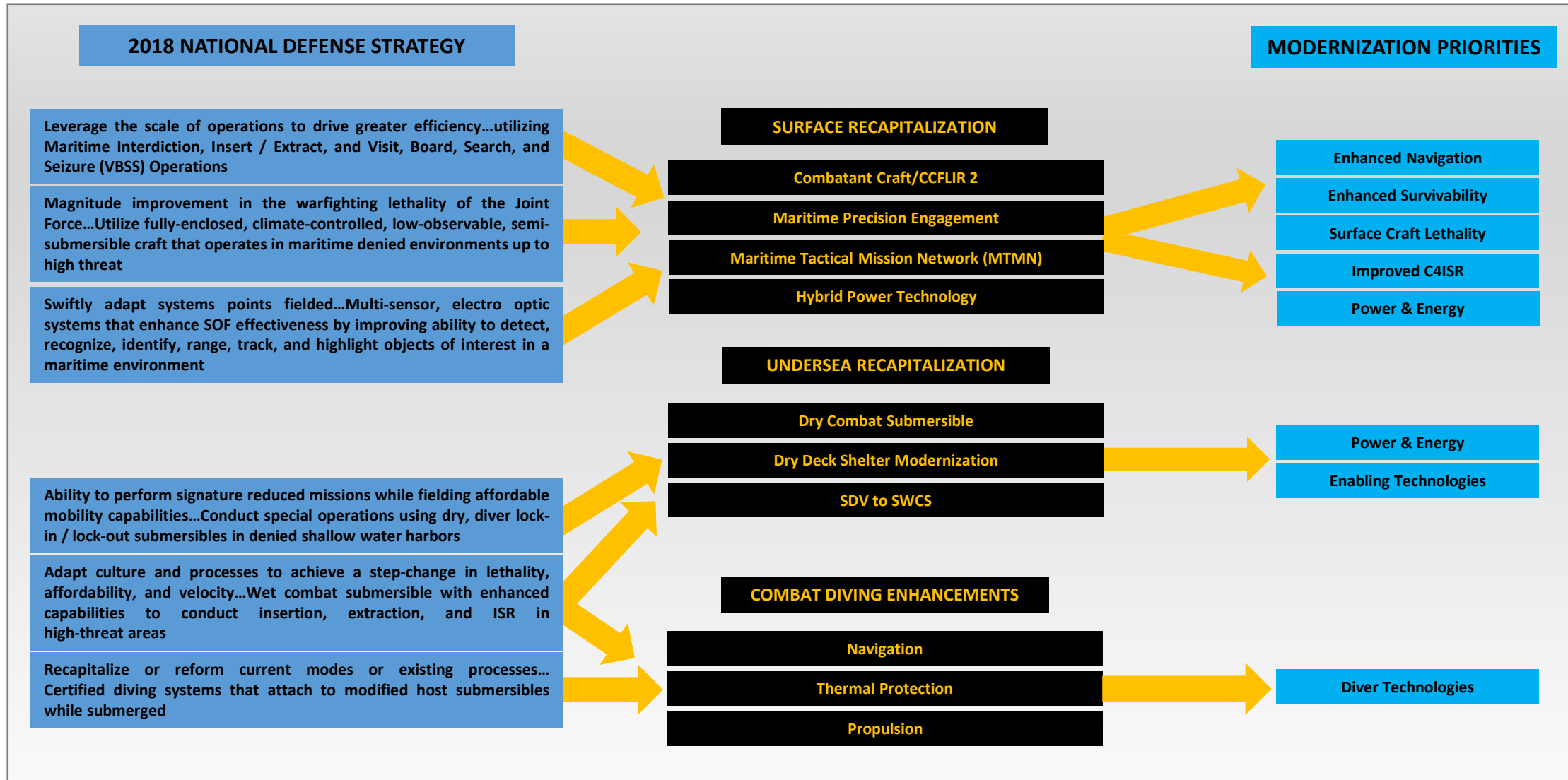


Combatant Craft Medium



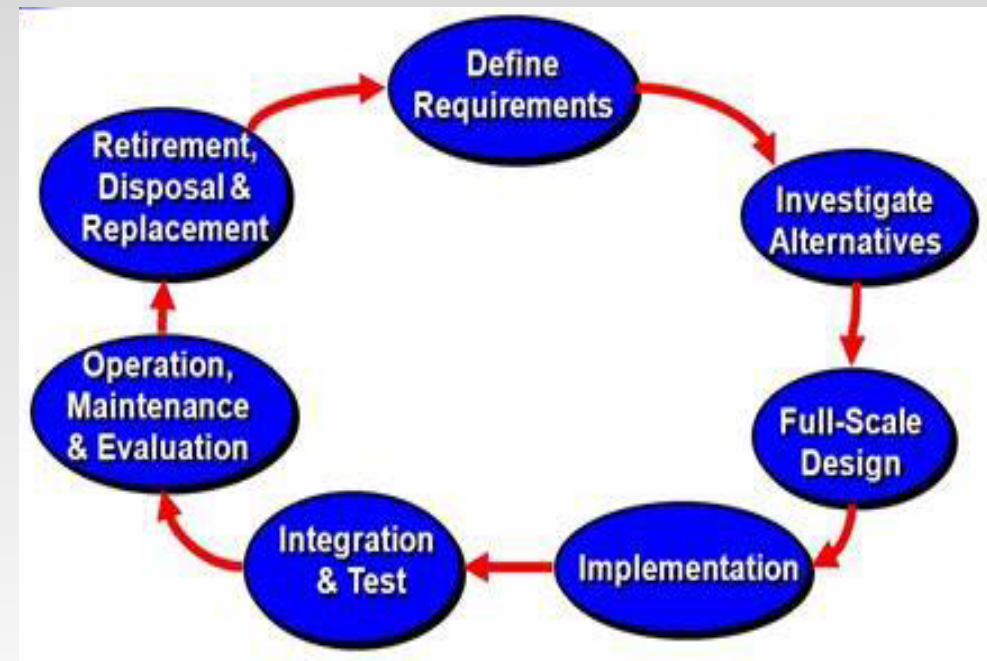
Next Gen CCFLIR2

Capability Focus Areas Alignment to NDS and Procurement Priorities

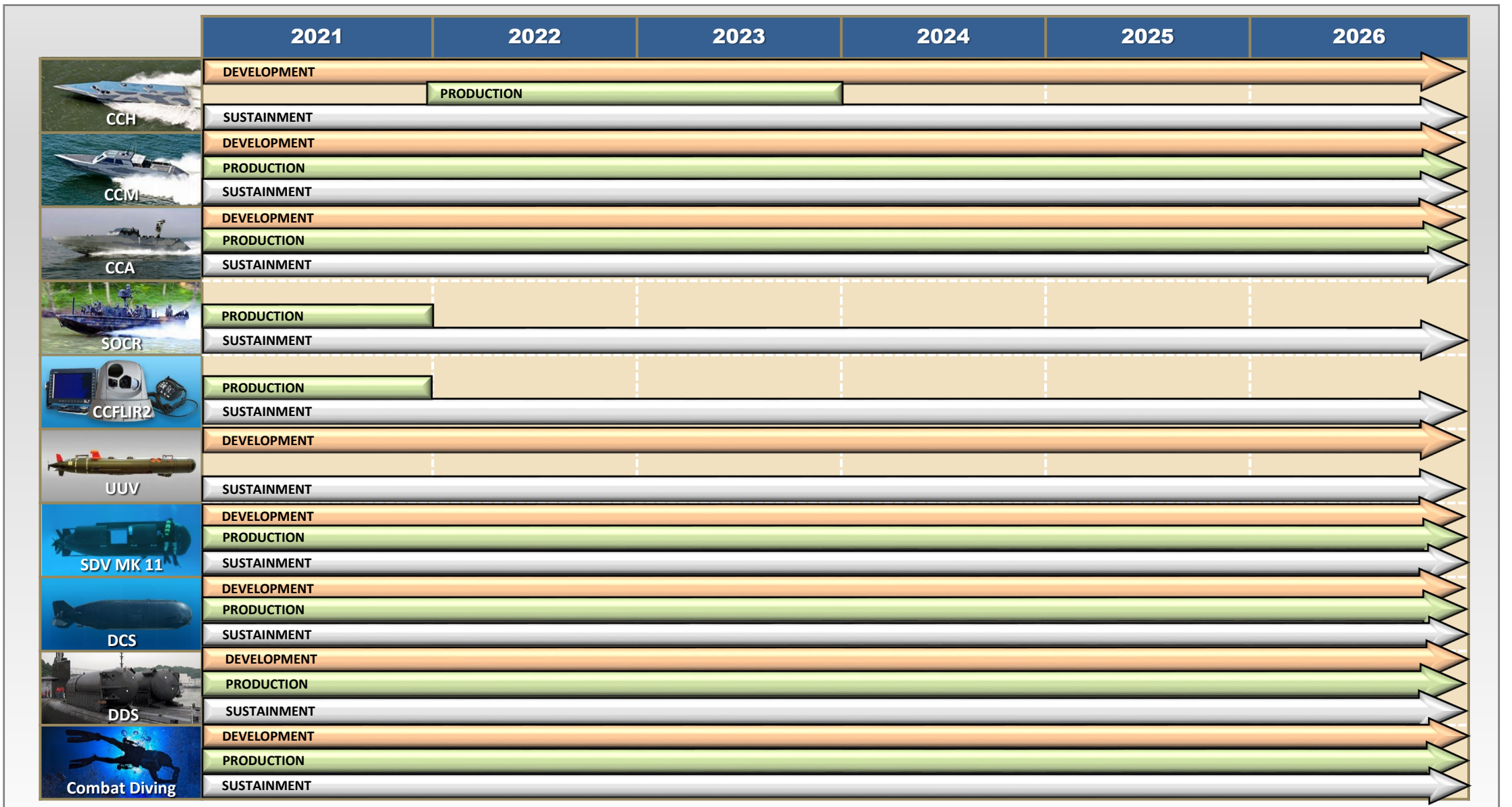


Why PEO Maritime is Unique

- Typically do not receive equipment from parent service
- Majority of platforms are Special Operations Peculiar (SO-p), built specifically to meet NSW requirements
- Full Life Cycle System Management
- Cradle to Grave – development to divestiture with two exceptions
 - MK 18 MOD 1 – service common UUV with SO-p modifications
 - Combat Diving – modified COTS, in addition to specific builds



NSW Craft Roadmap



Program Executive Office – Maritime

- **Continue Fielding Enhanced Capability**

- Recapitalization/Upgrade of the Fleet
 - Combatant Craft/CCFLIR2
 - SDV MK 8 to SDV MK 11
 - Dry Deck Shelter modernization
- New capabilities
 - Dry Combat Submersible
 - Maritime Precision Engagement
 - SOF Combat Diving

- **Areas of Interest**

- Maritime Communications
- Power & Energy
- Fleet Interoperability
- Training and Operator Performance
- Enhanced Navigation
- Diver Thermal Protection
- Diver Equipment Power
- Survivability and Lethality
- Artificial Intelligence enabled capabilities

- **Reaching out to Industry Partners**

- Requests for Proposal
- Requests for Information
- Broad Area Announcements
- SOFWERX Collaboration events
- S&T Technical Experimentation events
- Industry Days



SPECIAL OPERATIONS FORCES ACQUISITION, TECHNOLOGY, & LOGISTICS EXPANDING THE COMPETITIVE SPACE

Mr. Jim Knudson, Program Manager Special Operations Forces Combat Diving
PORTFOLIO REVIEW



SOF Combat Diving

- Supports the individual diver, as well as integration with all PEO-Maritime systems and platforms
- Current efforts target equipment in the areas of maritime environmental protection, diver propulsion, diver navigation, and underwater communication (diver-to-diver and diver-to-platform)
- Supports development of enhanced diving capabilities for operators using both wet and dry submersibles



ACQUISITION STRATEGY

- Utilization of existing contracts, other government agencies, and new contracts competitively selected

PERIOD OF PERFORMANCE

- Planned FY21 through FY26

MILESTONES

- Various Based on Projects

POINT OF CONTACT

- USSOCOM SOF AT&L, Engage SOF (eSOF), (813) 826-1269, eSOF@socom.mil

FUNDING

- RDT&E FY21 through FY26
- PROC FY21 through FY26
- O&M FY21 through FY26

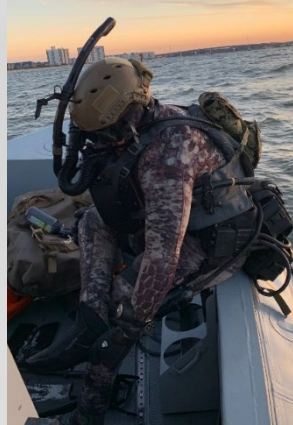
CURRENT CONTRACT/OEM

- DLA Troop Support, Philadelphia, PA
- See Following Slides for List of Major Suppliers

SOF Combat Diving Requirement Areas

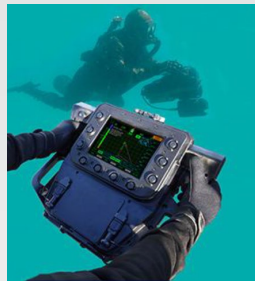
• Maritime Environmental Protection

- Enhanced thermal regulation
 - Active and passive heating and cooling
- Full face mask
 - For use with closed-circuit rebreather
 - Incorporates voice communications
- Excursion-capable O2 Underwater Breathing Apparatus (UBA)
- Chemical, Biological, Radiological, and Nuclear or Explosive (CBRNE) protection



• Diver Navigation

- Hand-held and collective capabilities
 - Situational awareness
 - Navigational accuracy (positioning)



• Diver Propulsion

- Collective, individual and hands-free capabilities
 - Compact size and reduced weight
 - Flexible delivery options (ship, submarine)
 - Commonality



• Underwater Communication

- Diver-to-diver and diver-to-platform
- Android Tactical Applications Kit (ATAK)
- Acoustic and Optical
 - Text and data
 - Voice (air and HeO2)
 - Full motion video



SOF Combat Diving Major Industry Partners

- Advanced Diver Solutions, Virginia Beach, VA
- Aqua Lung, Vista, CA
- Rini Technologies, Oviedo, FL
- General Atomics, San Diego, CA
- Partiot3 Maritime, Fredericksburg, VA
- Stidd Systems Inc., Greenport, NY
- SUEX SRL, Villorb, Italy
- Marine Tech SA, Krosno, Poland
- Ceebus Technologies, Boulder, CO
- Nellis Engineering, Inc., West Sacramento, CA
- Woods Hole Oceanographic Institution, Woods Hole, MA
- Shark Marine Technologies, Inc., St. Catharines, Ontario, Canada



Diver Navigation



Maritime Environmental Protection



Underwater Comms (Diver-to-Diver)



Diver Propulsion





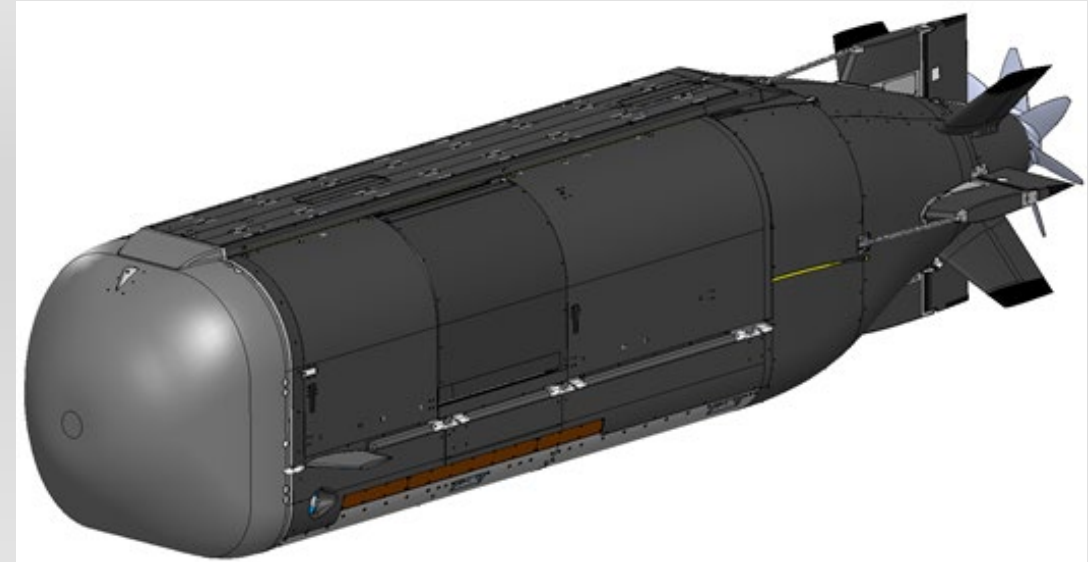
SPECIAL OPERATIONS FORCES ACQUISITION, TECHNOLOGY, & LOGISTICS
EXPANDING THE COMPETITIVE SPACE

CAPT Brian O'Lavin, Program Manager Naval Special Warfare
PORTFOLIO REVIEW



SEAL Delivery Vehicle MK 11

- Next generation free-flooding wet combat manned submersible to transport Special Operations Forces (SOF) personnel and equipment for a variety of missions
- SDV MK 11 replaces the current SDV MK 8, Mod 1 vehicle



ACQUISITION STRATEGY

- Full and open competition
- Contract awarded in 2011
- Follow-On Production Contract awarded in 2019

PERIOD OF PERFORMANCE

- FY11 through FY20
- FY19 through FY24

MILESTONES

- IOC: Planned for FY22
- FOC: Planned for FY23

POINT OF CONTACT

- USSOCOM SOF AT&L, Engage SOF (eSOF), (813) 826-1269, eSOF@socom.mil

FUNDING

- RDT&E FY21 through FY26
- PROC FY21 through FY26
- O&M FY21 through FY26

CURRENT CONTRACT/OEM

- Teledyne Brown Engineering, Huntsville, AL

SEAL Delivery Vehicle MK 11

- **SDV MK 11 vs SDV MK 8 Size/Weight Differences**
 - SDV MK 11 is 12” longer, 6” taller and wider
 - SDV MK 11 is 4000lbs > SDV MK 8
- **SDV MK 11 Enhancements over SDV MK 8**
 - Intel Core i7 Processors, Secure SSD, GB Ethernet Backbone
 - Improved software and User Interface
 - Higher accuracy navigation
 - Increased cargo and payload capacity

- **Project Status**

- Boats 1 & 2: Delivered May & Jun 2018
- Boats 3 & 4: Delivered Mar & Apr 2020
- Boat 5: Delivered Jun 2020
- Boats 6 – 10: Planned FY22 through FY23



MK 18 Mod 1 UUV

- MK 18 Mod 1 UUV enables access to high threat areas in the maritime domain, expands access and reach into littorals and reduces risk to personnel/manned platforms. Provides enhanced situational awareness and access & placement.
- Service Common Platform incorporating Special Operations-peculiar Modifications



ACQUISITION STRATEGY	PERIOD OF PERFORMANCE	MILESTONES
<ul style="list-style-type: none"> • Procure <u>Service Common (MFP-2)</u> man-portable UUV PoR and augment it with purpose built, modular, plug-and-play sensors/payloads to meet SOF Peculiar requirements (MFP-11). 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • IOC: Planned for FY21 • FOC: Planned for FY22
POINT OF CONTACT	FUNDING	CURRENT CONTRACT/OEM
<ul style="list-style-type: none"> • USSOCOM SOF AT&L, Engage SOF (eSOF), (813) 826-1269, eSOF@socom.mil 	<ul style="list-style-type: none"> • RDT&E FY21 through FY26 • PROC None • O&M FY21 through FY26 	<ul style="list-style-type: none"> • Hydroid, Pocasset, MA



SPECIAL OPERATIONS FORCES ACQUISITION, TECHNOLOGY, & LOGISTICS
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CAPT Jonathan Kim, Program Manager SOF Undersea Mobility
PORTFOLIO REVIEW



Dry Deck Shelter

- The Dry Deck Shelter (DDS) is a certified diving system that attaches to modified submarines. The program provides material safety certification, maintenance, modernization (Field Changes) and minor modifications for the DDS
- Maintenance and modernization contract to include Restricted Availabilities (RAVs), Regular Overhauls (ROHs) and Configuration Changes



ACQUISITION STRATEGY

- DDS Maintenance Contract (open competition)
- Contract awarded in 2018

PERIOD OF PERFORMANCE

- FY18 through FY23

MILESTONES

- FOC: FY91
- Modernized DDS IOC: FY21

POINT OF CONTACT

- USSOCOM SOF AT&L, Engage SOF (eSOF), (813) 826-1269, eSOF@socom.mil

FUNDING

- RDT&E FY21 through FY26
- PROC FY21 through FY26
- O&M FY21 through FY26

CURRENT CONTRACT/OEM

- Oceaneering International Inc. – Marine Services Division (OII-MSD)

Dry Deck Shelter

Dry Deck Shelter Modernization Project

Mod DDS Configuration Changes

- Field Change (FC) 167 – Remotely Operated Hangar Outer Door
- FC 168 – Extend shelter 50 inches
- FC 169 – Increased capacity Payload Launch and Recovery System
- FC 170 – Remote Control from the host submarine

Mod DDS Objectives

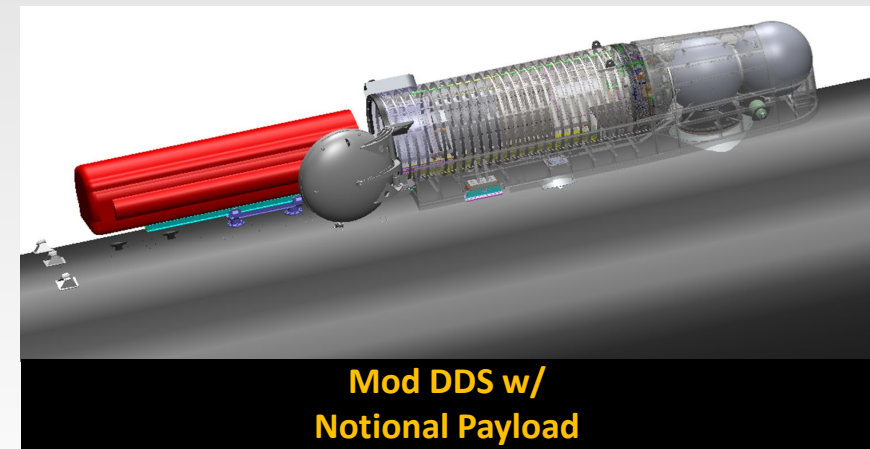
- Increase payload volume by 30%
- Increase weight capacity by 300%
- Remote hangar operation from Virginia Class host submarine
- Reduce risk to host submarine
- Reduce operator fatigue

Project Status

- Preliminary Design Review completed Sep 2016
- Critical Design Review completed Dec 2017
- Technical Data Package approved Jul 2020
- Technical Demonstrator Production – ECD Jun 2021

Target Payloads

- Naval Special Warfare (NSW)
- SEAL Delivery Vehicle MK 11 (SDV MK 11)
- Large Displacement Unmanned Undersea Vehicle (LDUUV)
- Littoral Battlespace Sensing – AUV, Submarine (LBS-AUV(S))



Dry Deck Shelter – Future Efforts

DDS Enhancements

- Increase payload capability to support SDV MK 11
- Modifications of DDS to support SOF stowage
- SOF Carry-on Hardware approvals

Host Sub (HOSUB) interoperability

- Initial fit-up of DDS to VIRGINIA Class (VACL) Hosts
- Cross Fit of DDS to support multiple VACL Hosts
- Improve services from Host to DDS in support of Carry-on Hardware



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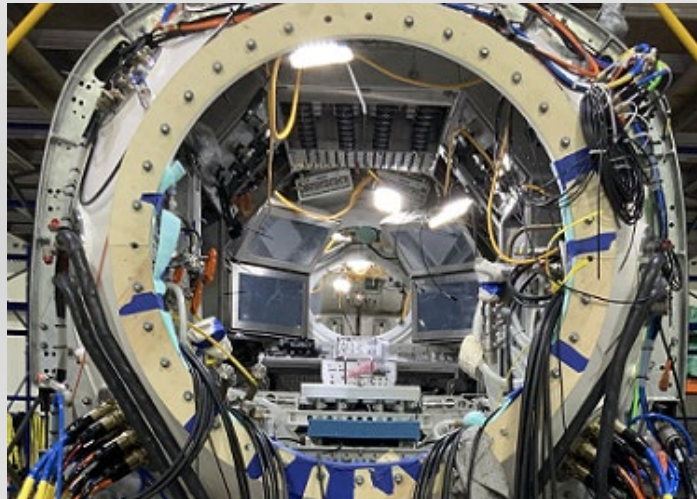
CDR Scott Delwiche, Program Manager Undersea Systems
PORTFOLIO REVIEW



Dry Combat Submersible (DCS) Block I



DCS 1 Preparing for an Underway



DCS 2 Electrical Cable Assembly



DCS 3 Pressure Hull

ACQUISITION STRATEGY

- Full and Open competition for production representative system with options for up to two additional systems

PERIOD OF PERFORMANCE

- FY16 through FY21

MILESTONES

- IOC: FY21
- FOC: FY22

POINT OF CONTACT

- USSOCOM SOF AT&L, Engage SOF (eSOF), (813) 826-1269, eSOF@socom.mil

FUNDING

- RDT&E FY21 through FY26
- PROC FY21 through FY26
- O&M FY21 through FY26

CURRENT CONTRACT/OEM

- Lockheed Martin RMS (Prime)
- Submergence Group, LLC (Major Subcontractor)
- MSubs Ltd. (Major Subcontractor)

DCS Next Efforts

New Dry Submersible Program

- Interoperable with specific US Navy submarines
- System certification by a member of the International Association of Classification Societies
- USSOCOM certifies for SOF embarkation
- NAVSEA certifies for submersible interoperability with the submarine

Submarine Interoperability

- Launch, locate, home, recover, replenish, sustain and maintain
- Mated solution on VIRGINIA Class submarines at Logistics Escape Trunk

Surface Ship Interoperability

- Launch, locate, home, recover, replenish, sustain and maintain
- Potential Navy surface ship vessels of opportunity not defined at this time

Market research including

- DCMA Industrial Capability Assessment
- Technology Risk Reduction studies
- Industry days/Industry visits
- Naval Sea Systems Command enterprise coordination/collaboration

DCS Program Future Efforts

New or Evolving Technologies

- Submersible Energy Sources
- Software Defined/Hardware Enabled Systems
- Information Assurance/Machine Learning
- Electro-Optical/Infra-Red Sensor Capability
- Subsurface Sensor Capability
- Integrated UAS Capability for Sensor Range Extension
- Lightweight Panel Assemblies/Exostructure
- Composite Gas Cylinders/Flasks



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CAPT Rocky Russell, Program Manager Surface Systems
PORTFOLIO REVIEW



Combatant Craft Heavy (CCH): SEALION

- Provides long range insertion and extraction capabilities
- SEALION III delivery
- 2 of 3 fielded



ACQUISITION STRATEGY

- Two tech demonstrators transferred from USN
- SEALION III sole source award

PERIOD OF PERFORMANCE

- FY16 through FY21

MILESTONES

- IOC: FY14
- FOC: FY21

POINT OF CONTACT

- USSOCOM SOF AT&L, Engage SOF (eSOF), (813) 826-1269, eSOF@socom.mil

FUNDING

- RDT&E FY21 through FY26
- PROC FY22 through FY23
- O&M FY21 through FY26

CURRENT CONTRACT/OEM

- Vigor Works, LLC (OEM)
- SOFSA/Lockheed Martin (CLS)

Combatant Craft Medium (CCM) MK 1

- Multi-role surface combatant craft with the primary mission of inserting and extracting SOF in medium threat environments
- Began initial craft deliveries to east coast operational unit
- 30 of 30 fielded



ACQUISITION STRATEGY

- Small business set aside using competitive prototyping

PERIOD OF PERFORMANCE

- FY15 through FY22

MILESTONES

- IOC: FY15
- FOC: FY21

POINT OF CONTACT

- USSOCOM SOF AT&L, Engage SOF (eSOF), (813) 826-1269, eSOF@socom.mil

FUNDING

- RDT&E FY21 through FY26
- PROC FY21 through FY26
- O&M FY21 through FY26

CURRENT CONTRACT/OEM

- Vigor Works, LLC (OEM)
- SOFSA/Lockheed Martin (CLS)

Combatant Craft Assault (CCA)

- Medium range, maritime assault, interdiction, insertion and extraction platform
- Follow-on production contract for Capital Equipment Replacement program
- 32 of 32 fielded



ACQUISITION STRATEGY

- New production contract
- Post-production and contractor logistics support through SOFSA

PERIOD OF PERFORMANCE

- FY20 through FY24

MILESTONES

- FOC: FY20

POINT OF CONTACT

- USSOCOM SOF AT&L, Engage SOF (eSOF), (813) 826-1269, eSOF@socom.mil

FUNDING

- RDT&E FY21 through FY26
- PROC FY21 through FY26
- O&M FY21 through FY26

CURRENT CONTRACT/OEM

- US Marine Inc. (OEM)
- SOFSA/Lockheed Martin (CLS)

Combatant Craft Forward Looking Infrared (CCFLIR)

- Provides SOF with a multi-sensor, electro-optic system that enhances SOF effectiveness by improving their ability to detect, recognize, identify, range, track and highlight objects of interest in a maritime environment
- Integrated and deployed on CCM and CCH
- CCA integration in design and test stage
- 47 of 58 delivered



ACQUISITION STRATEGY

- Full and Open Competition completed FY15
- Modified GOTS technology

PERIOD OF PERFORMANCE

- FY15 through FY24

MILESTONES

- IOC: FY18
- FOC: FY24

POINT OF CONTACT

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FUNDING

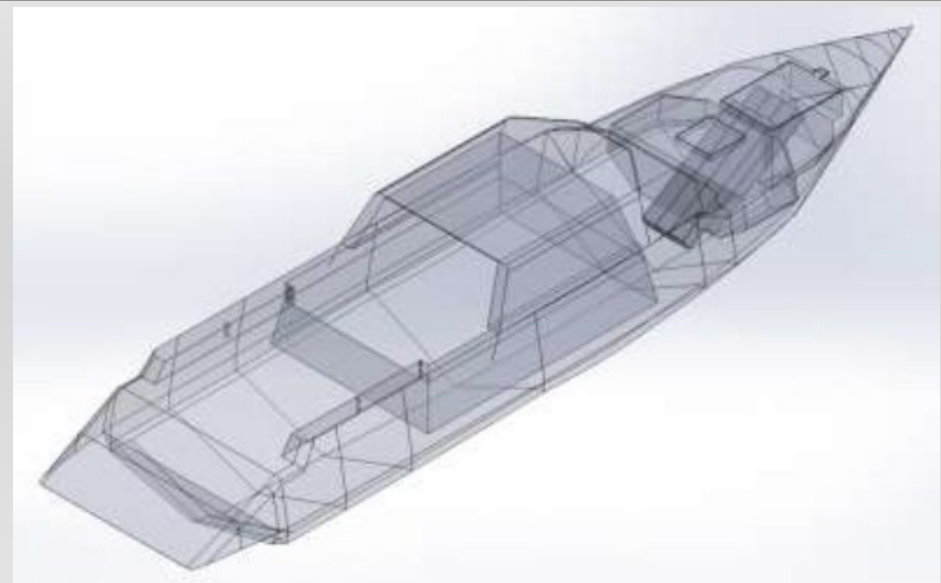
- RDT&E None
- PROC FY21
- O&M FY21 through FY26

CURRENT CONTRACT/OEM

- FLIR Systems, Inc. (OEM)
- NSWC Crane – Sustainment

Maritime Precision Engagement (MPE)

- Pursuit of Standoff, Loitering, Man-in-the-loop Weapons system deployed on Combatant Craft and capable of targeting individuals, groups, vehicles and small oceangoing craft. The program consists of combatant craft alterations, launcher systems and munitions
- “A-Kit” prototype in fabrication
- Munition development



ACQUISITION STRATEGY

- Government design effort for craft integration and control system

PERIOD OF PERFORMANCE

- TBD

MILESTONES

- Continual assessment of design safety and suitability
- Candidate munition(s) availability for testing

POINT OF CONTACT

- USSOCOM SOF AT&L, Engage SOF (eSOF), (813) 826-1269, eSOF@socom.mil

FUNDING

- RDT&E FY21 through FY26
- PROC FY22 through FY26
- O&M FY22 through FY26

CURRENT CONTRACT/OEM

- OEM - TBD
- NSWC Dahlgren – System Development
- NSWC Carderock – Craft Integration

Combatant Craft Mission Equipment (CCME)

- Provides advanced technologies to correct system deficiencies, improve asset life and augment mission requirements. It provides rapid response solutions to support combatant craft systems, sub-systems and their evolving requirements
- Advanced sensors and communications
- Assured/Alternative Position, Navigation & Timing



ACQUISITION STRATEGY

- Integrate high TRL technologies across the family of combatant craft through BAAs, SIBRs and existing government contracts

PERIOD OF PERFORMANCE

- Varies per task

MILESTONES

- Varies per task

POINT OF CONTACT

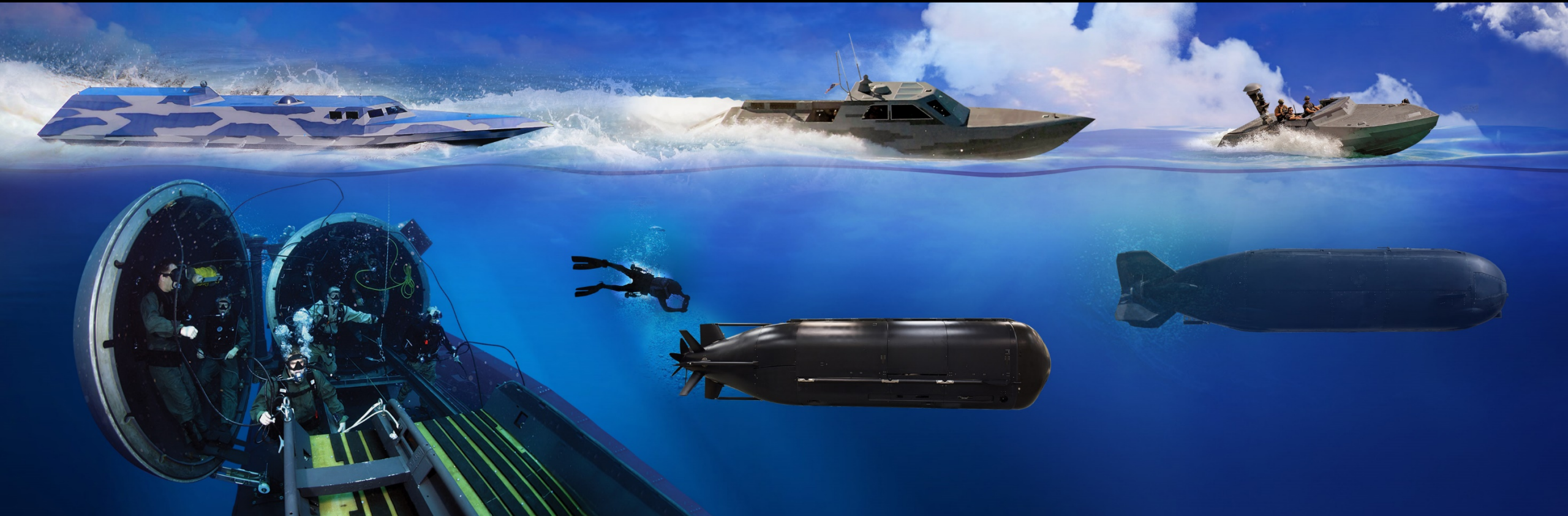
- USSOCOM SOF AT&L, Engage SOF (eSOF), (813) 826-1269, eSOF@socom.mil

FUNDING

- RDT&E FY21 through FY26
- PROC None
- O&M None

CURRENT CONTRACT/OEM

- NSWC – Carderock
- NAWC – Aircraft Division (C5ISR Integration)



SPECIAL OPERATIONS FORCES ACQUISITION, TECHNOLOGY, & LOGISTICS
EXPANDING THE COMPETITIVE SPACE

Mr. John Bailey, Maritime Chief Engineer
PORTFOLIO REVIEW



S&T / R&D Opportunities for Industry

- For FY20 PEO-M requested significant additional RDT&E funding to build capability in the areas listed below
- PEO-M is actively seeking opportunities to invest in innovative technology development efforts and to partner with industry



ACQUISITION STRATEGY

- Leverage both existing and new contracts. Use IDIQ / RFP / BAA / SBIR / STTR / OTA
- Open architectures – maximize opportunity for rapid integration of new technology

POTENTIAL FY21 ENGAGEMENT OPPORTUNITIES

- TE Events – SOF Combat Diving, Surface Systems
- SOCOM S&T BAA
- OTAs
- SOFWERX Engagements

FY21-FY26 TECHNOLOGY INTEREST AREAS

- Interoperable Maritime Communications Architecture
- Power & Energy
- Enhanced Survivability
- Strategic Initiatives & Fleet Interoperability
- Artificial Intelligence-enabled capabilities
- Enhanced Navigation
- Improved C4ISR Capabilities
- Diver Technologies
- Training & Operator Performance

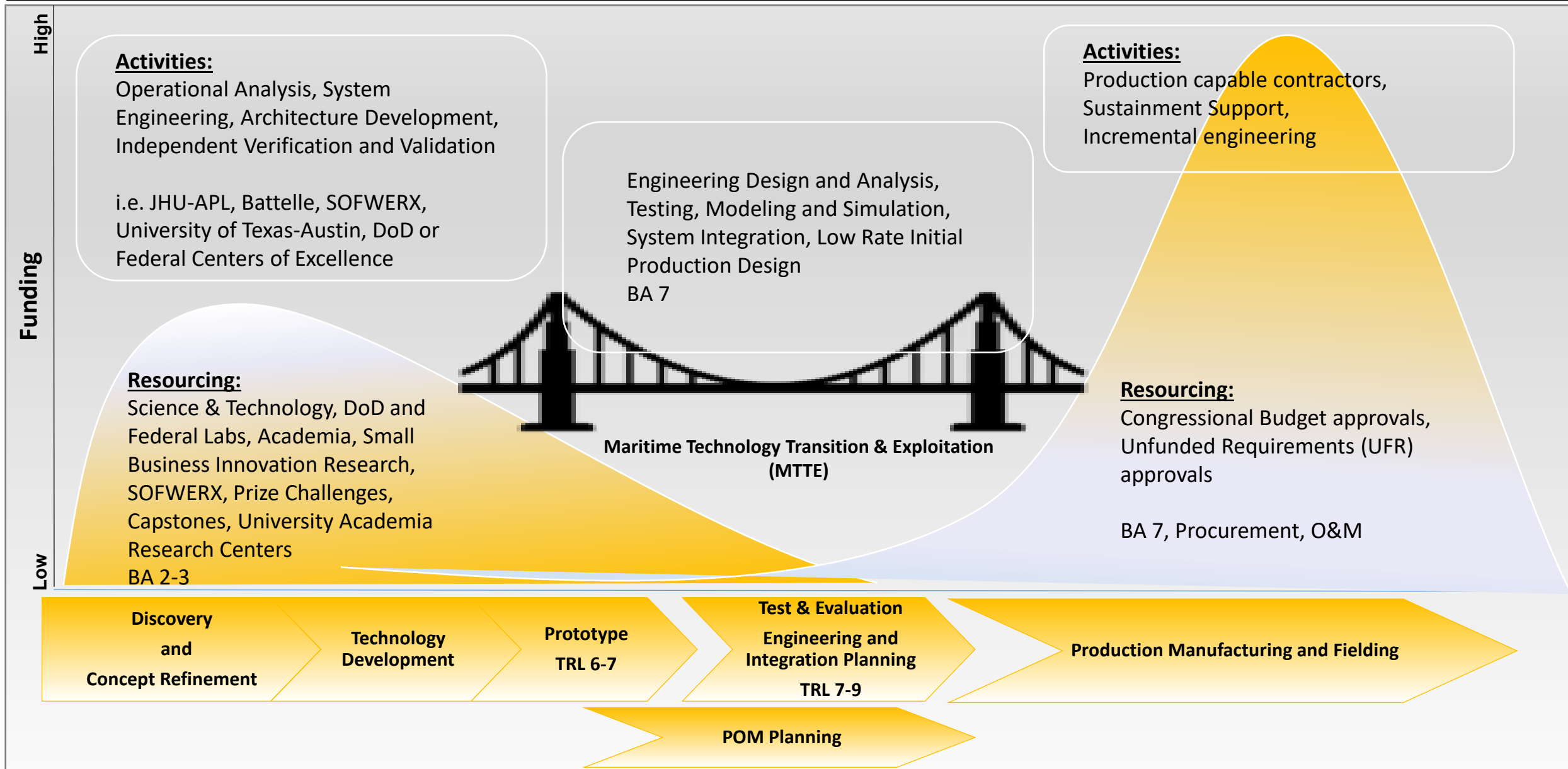
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FUNDING

- | | |
|---------|-------------------|
| • RDT&E | FY21 through FY26 |
| • PROC | None |
| • O&M | None |

Chief Engineering Office



Opportunities

- **Broad Agency Announcements (BAA) & Requests For Information (RFI)**
 - **USSOCOM Science & Technology (S&T) Directorate**
- **Office of the Secretary of Defense Programs**
 - **Small Business Innovation Research (SBIR)**
 - **Small Business Technology Transfer (STTR)**
 - **Foreign Comparative Test (FCT)**
- **Other Transaction Authorities**
 - **Undersea Technology Innovation Consortium (UTIC)**
- **Cooperative Research And Development Agreements (CRADAs)**



Opportunities

- Collaborative efforts with Government Laboratories, University Affiliated Research Centers, Federally Funded Research & Development Centers, Land Grant Universities, etc.
- USSOCOM S&T Technical Experimentation Events
- USSOCOM Acquisition Agility Events – SOFWERX
- USSOCOM S&T Technology Scouting
 - www.atlas-sof.com
- USSOCOM Engage SOF (eSOF)





SPECIAL OPERATIONS FORCES ACQUISITION, TECHNOLOGY, & LOGISTICS EXPANDING THE COMPETITIVE SPACE

QUESTIONS?

