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UNDERSEA WARFARE COMBAT SYSTEMS



Code 25 Industry Day Brief

23 October 2018



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USW Combat Systems Department



OUR MISSION:

We will exceed customer expectations by providing high quality, affordable products and services while helping to shape the next generation of USW systems.

Our workforce is focused on innovation, agility and collaboration to provide effective, best value solutions for our customers.

OUR VISION:

Ensure Warfighter Command of the Undersea Battlespace.

OUR PRINCIPAL ROLES:

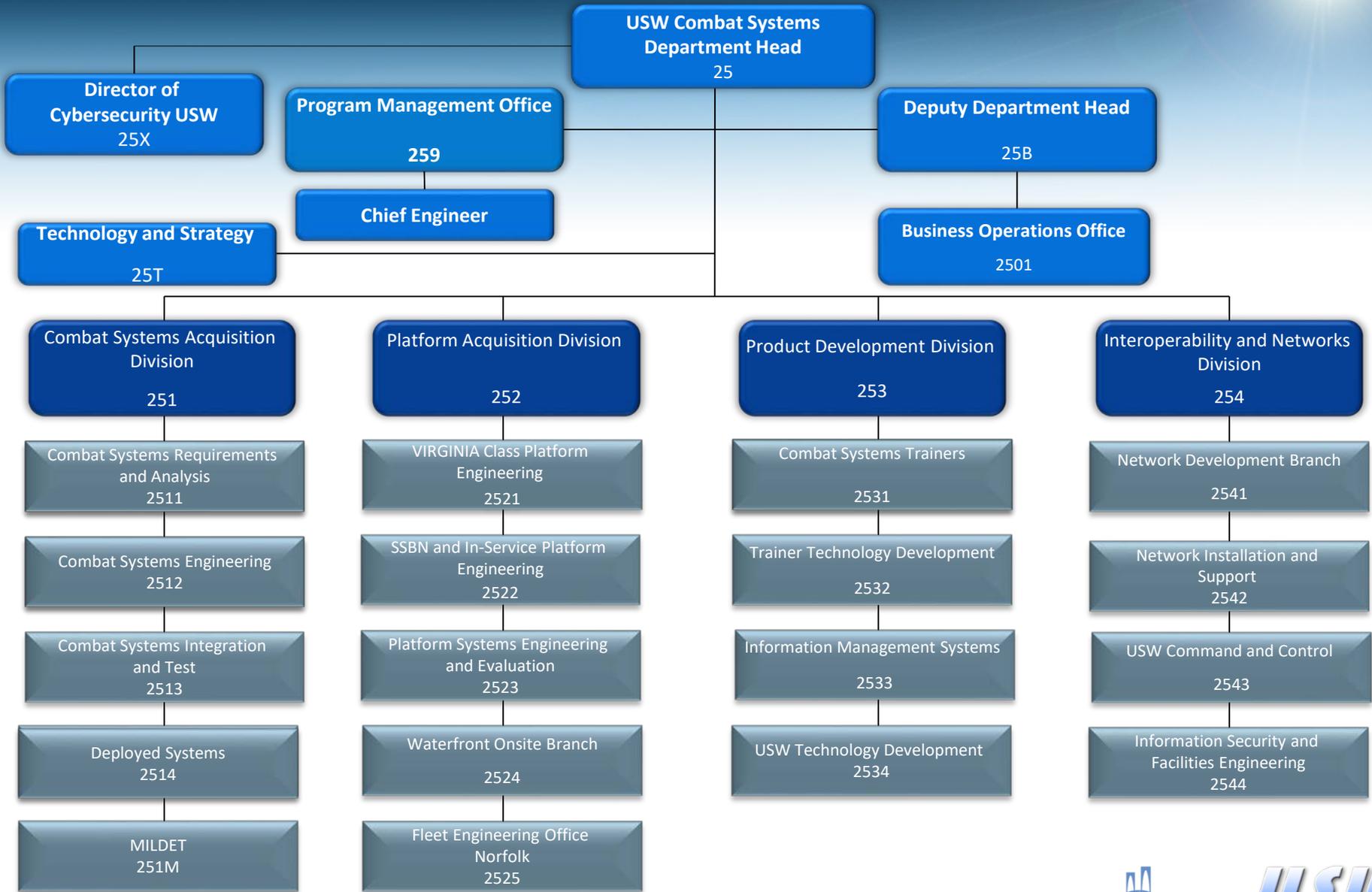
- *Technical Direction Agent*
- *In-Service Engineering Agent*
- *Design Agent*
- *Central Design Authority*



Stewardship of USW Combat Systems Technical Health

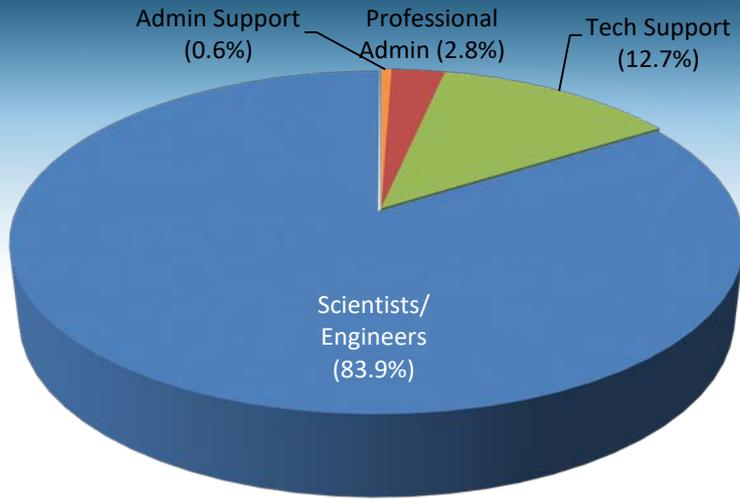


USW Combat Systems Department

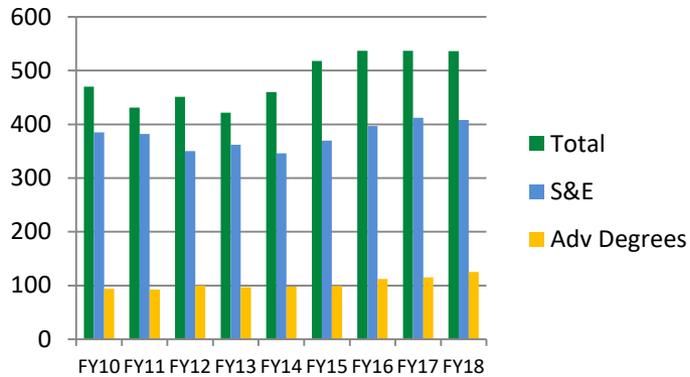


Our People

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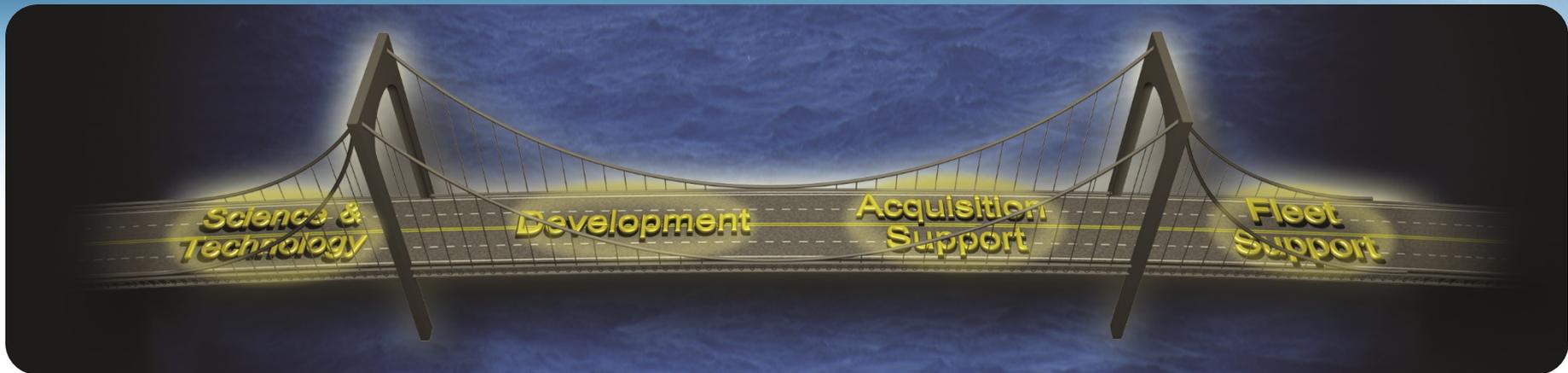


Our Highly Skilled Workforce* is Among the Most Qualified in the Field
Our S&E's Advanced Degrees - 9 PhDs (2%) and 116 Masters (22%)



USW Combat Systems Programs

Bridge to the Fleet



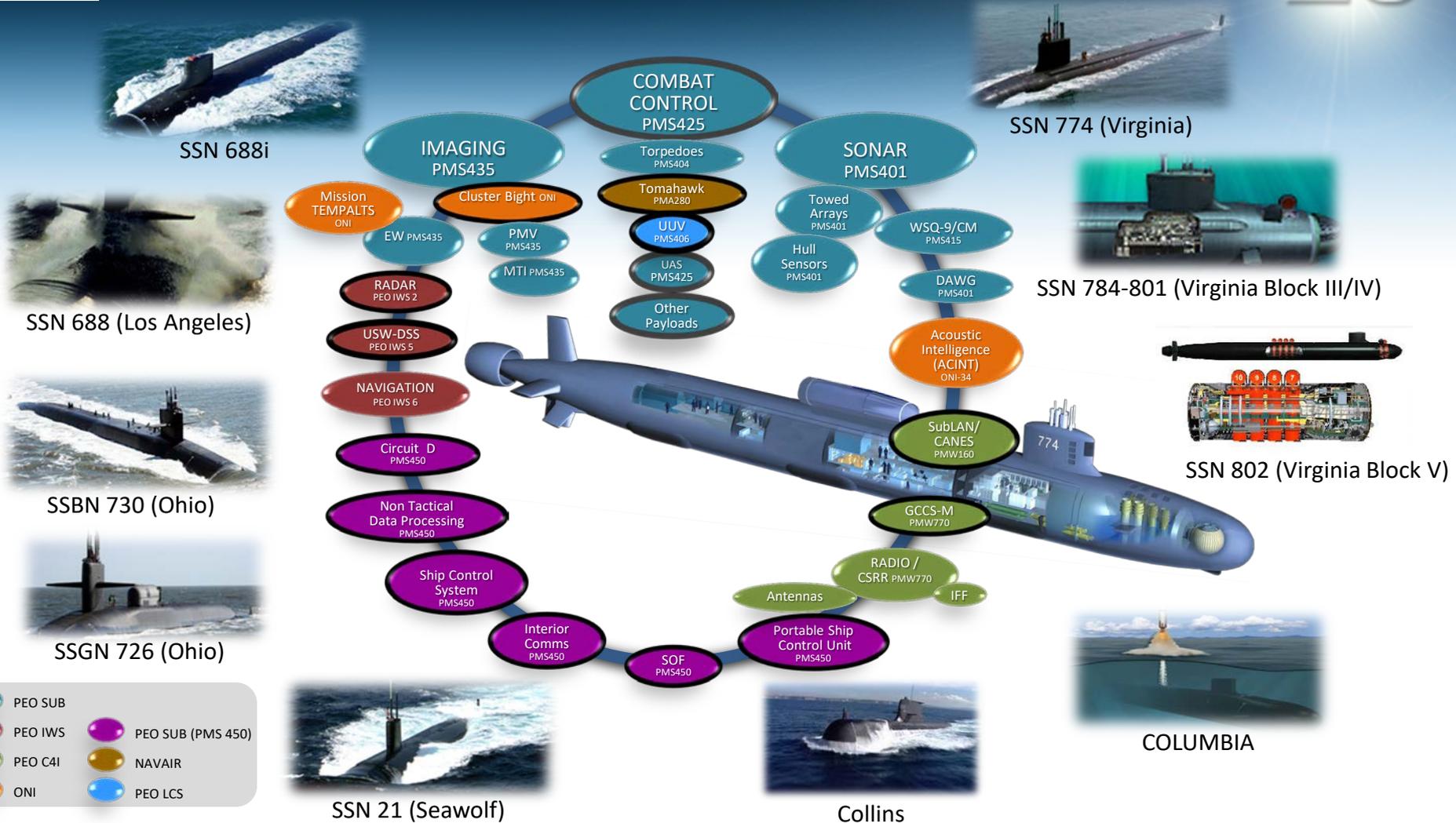
- Naval Tactical Cloud
- Unmanned Undersea/Air Vehicle (UxV) Common Control
- Command & Control (C2) Rapid Prototyping Continuum
- Human Factors Engineering
- Virtual Worlds
- Live/Virtual/Constructive
- Advanced Virtualization Techniques

- Unmanned Aerial Systems
- Virginia Payload Module (VPM)
- Combat Systems Virtualization
- Submarine Warfare Federated Tactical System (SWFTS) Common Services
- Wide Area Integration Facility
- Virtual Sub

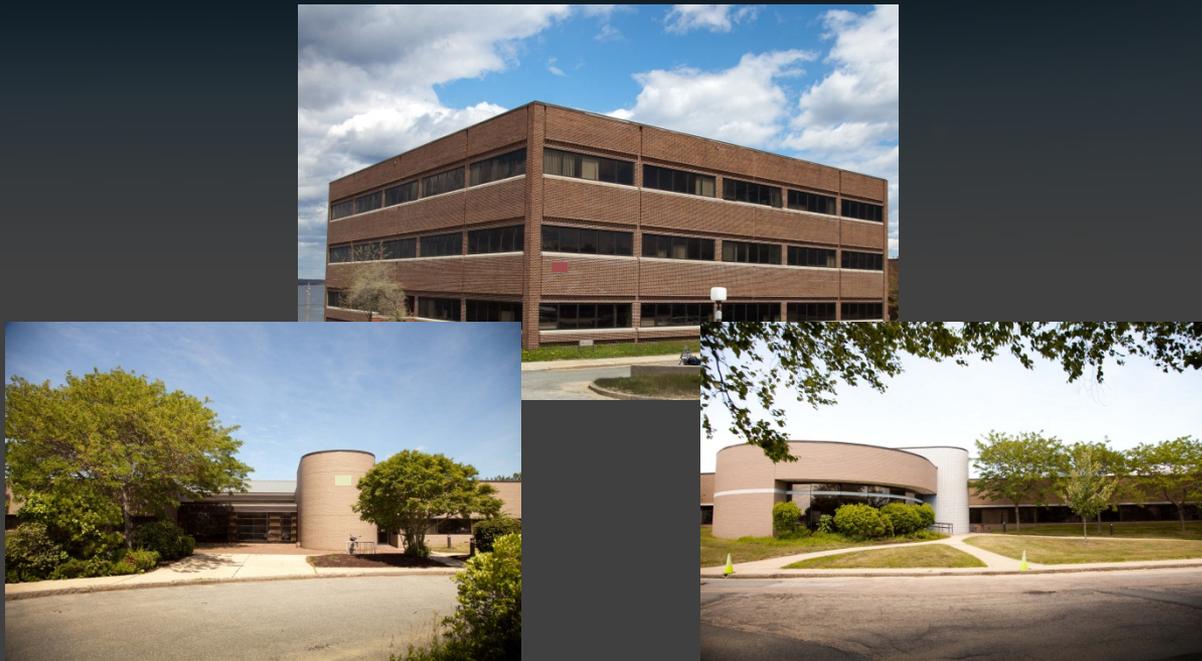
- AN/BYG-1
- Tactical Tomahawk Weapons Control System (TTWCS)
- Virginia
- Columbia Non-Propulsion Electronic Systems (NPES)
- Trainers (Submarine Multi Mission Team Trainer (SMMTT), Submarine Bridge Trainer (SBT))
- SWFTS
- Submarine Local Area Network (SubLAN)
- Submarine Consolidated Afloat Network and Enterprise Services (CANES)
- USW Strike
- AN/UYQ-100 (USW Decision Support System (DSS))
- International Programs
- Cybersecurity

- Submarine Combat Systems In-Service Engineering Agent (ISEA)
- Ohio/Seawolf ISEA
- Tomahawk Logistics and Fleet Support
- SSGN Attack Weapon Control
- Operational Documentation
- Trainer On Site Agents
- Global Command & Control System-Maritime (GCCS-M)
- Navy Training Management Planning System (NTMPS)
- SEAWARE-Learning Management System (LMS)/Submarine On-Board Trainer (SOBT)
- Nosis
- Surface HM&E Trainers

Diverse Set of Customers Across SYSCOMs, ONR and the Fleet



Executing Technical Authority Across Programs, Platforms, and System of Systems



Division Newport Offices and Laboratories

- **Key Facts:**
 - *Located in Newport, RI on the Naval Undersea Warfare Center Division Newport campus*
 - *Office Space: 3 buildings, approximately 90,000+ square feet accommodating over 500 government, contractors and military personnel.*
 - *Laboratories: 3 separate labs totaling 90,000+ square feet supporting prototyping, development, in-service and fleet support and integrated logistics*
 - *Internal connectivity to other USW warfare systems via campus-wide fiber link*
 - *External connectivity to fleet, other government and Navy labs as well as industry*

Our Fleet Presence

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Fleet Engineering Office (FEO)
St Julien's Creek, VA



NUCWCIVNPT
On Site Office (OSO)
Kings Bay, GA



NUCWCIVNPT
Detachment (DET)
Bangor, WA

- Norfolk FEO - DoD Module Test and Repair
- Norfolk – Surface Trainers
- Kings Bay OSO and Bangor DET - waterfront engineering and trainers support for SSBN, SSGN and SSN NPES; Technical On-Site Agent for USW Trainers - TOSA



Pearl Harbor, HI

- BYG-1 Installation Coordination Rep - COMSUBPAC N7/N4
- TWCS Fleet Support Rep – COMSUBPAC N7/N4
- Technical On-Site Agent For USW Trainers - TOSA

Groton, CT

- Technical On-Site Agent For USW Trainers - TOSA
- Undersea Warfare Development Center
 - BYG-1
 - Strike Warfare Analyst
 - Virginia Liaison

Submarine Combat Support Center NUWC Newport RI



Ensuring Operational
Readiness
24/7/365

Our Onsite Program Reps

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Washington, DC

- PMS 397E NPES
- PMS 450W Virginia Requirements and Test
- PMS 425 AN/BYG-1
- PMS 404 Payloads
- Strategic Systems Programs
- NUWC Field Team – SCO

- Support over 20 projects across various portions of their respective product lifecycles
- Complement the expertise of our workforce resulting in a powerful technical resource that enables USW Combat System land-based prototyping, experimentation, development, integration and test, training, assessment and certification
- Combined with other Division Newport facilities and campus-wide connectivity, our labs provide the core component of the Virtual Submarine
- External linkages to industry via our Wide Area Integration Facility (WAIF) facilitate partnerships with these entities in promoting efficient development and integration of new capabilities



Major Programs

Program	Sponsor
USW Combat Systems /Surface Trainers	NAVSEA SEA07TR/PMS339
AN/BYG-1 Combat Control System	PEO SUB PMS425
Virginia Class Submarine	PEO SUB PMS450
<ul style="list-style-type: none"> Platform Engineering 	
<ul style="list-style-type: none"> Test & Evaluation (T&E) 	
<ul style="list-style-type: none"> Combat Systems 	
Tomahawk Weapon Control System (TWCS)	PEO (U&W) PMA-280
Ohio Non-Propulsion Electronic System (NPES) Engineering	NAVSEA PMS392
COLUMBIA	PEO SUB PMS397
Submarine Warfare Federated Tactical System (SWFTS)	PEO SUB-S
Submarine Networks	PEO C4I PMW160
Cyber Security	PEO SUB (PMS 425/397/450), SSP, SEA 05, Fleet, PHD NSWC

NPT Core Mission Area: Undersea Warfare Combat Systems



Ref: A Cooperative Strategy for 21 Century SeaPower

Today's Navy

Ship Class Focus

- RCI Modernization (TI/APB/ACB)
- Federated Subsystems (SWFTS)
- Common Computing Components
- System Reliability Emphasis
- Subsystem State Estimation
- Weapon Control Re-architecture
- Unmanned Aerial System Integration
- Platform Mission Planning
- CANES Commonality
- Information Assurance (IA)
- Certification and Accreditation
- Family of Tailored Trainers



Potential Game Changers/ Disruptive Technologies

- Quantum Computing
- Brain-machine Interface
- Autonomous Systems
- Neuroscience and Memory
- Machine Learning
- Data Visualization
- System Resiliency
- Cyber Anomaly Detection
- Intuitive Cognition



Next Navy (+5-10 yrs)

Current Focus

Deliver cyber secure combat system improvements that meet Navy's Ohio Replacement, Virginia Payload Module and Unmanned Vehicle Control objectives.

Integrated Force Focus

- "One System" Operator View
- Common Computing Components
- System Usability Emphasis
- All Source Data Fusion
- Weapon Control Enhancement
- Unmanned System Control
- Integrated Force Mission Planning
- Distributed Information Access
- Designed for Cybersecurity
- Virtual School Houses

Navy After Next (+20 yrs)

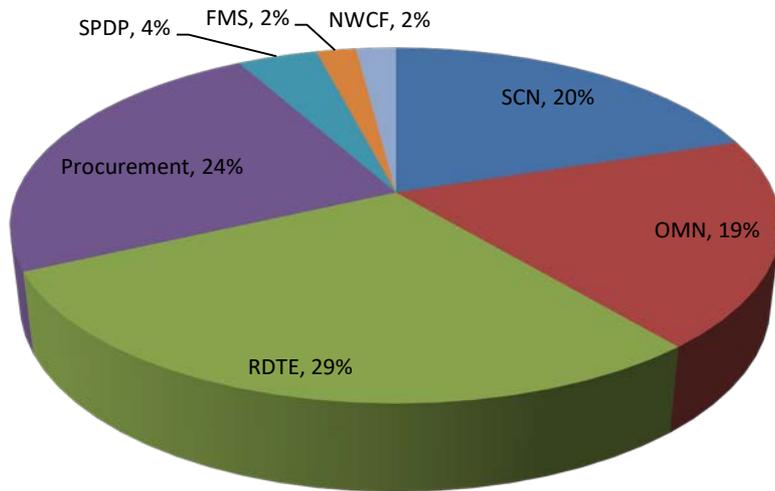
Vision of the Future

A rapidly reconfigurable, reduced footprint, CYBERSAFE system which supports the commanding officer and crew in mission execution through advanced reasoning, modeling, visualization and seamless payload and C2 interfaces.

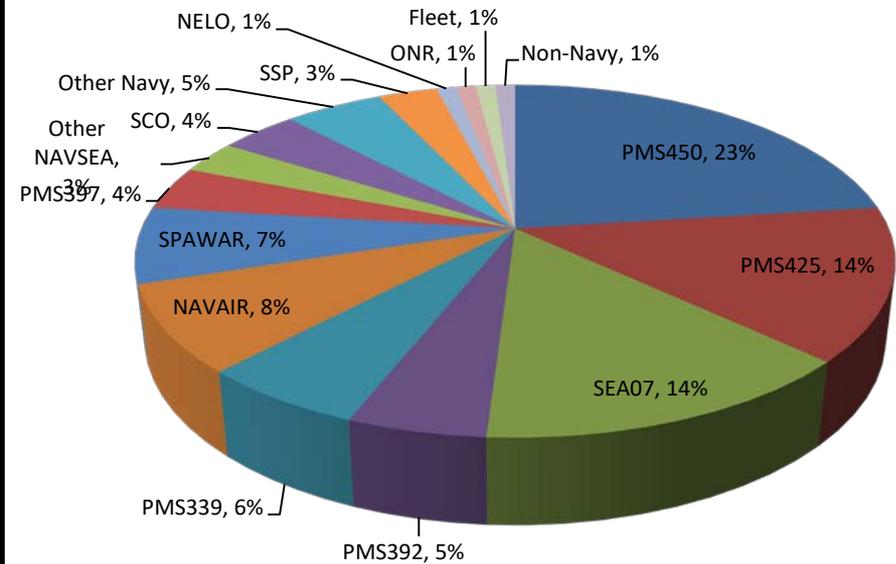
Knowledge Management Focus

- On Demand System Upgrades
- Application Services / Shared Server Farm
- Adaptive Task Management
- Automated Tactical Agents
- Flexible Payload Support
- Unmanned System Management
- Seamless C2 Data Exchange
- Cyber resiliency
- Adaptive In-Stride Training

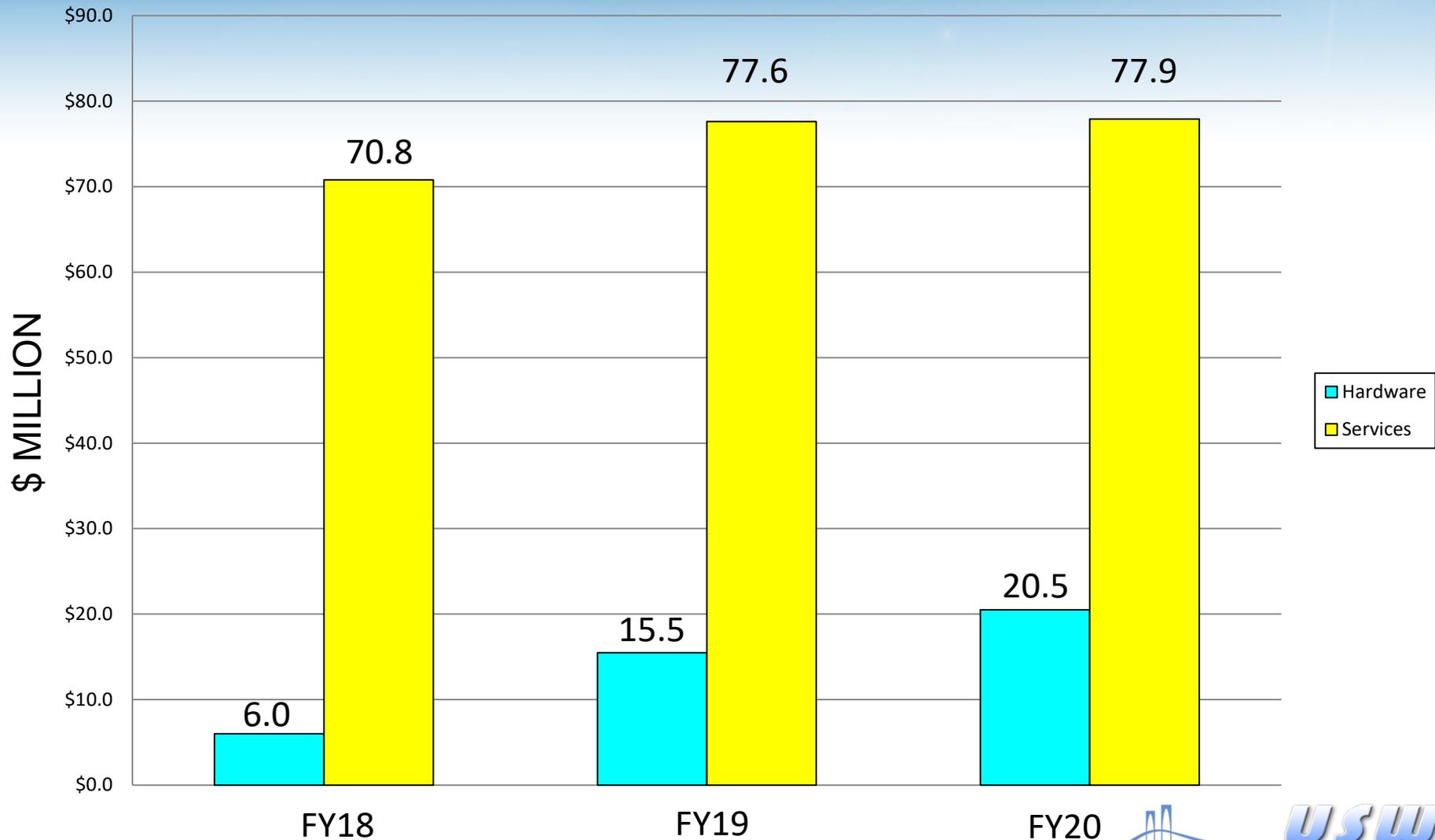
FUNDING BY APPROPRIATION



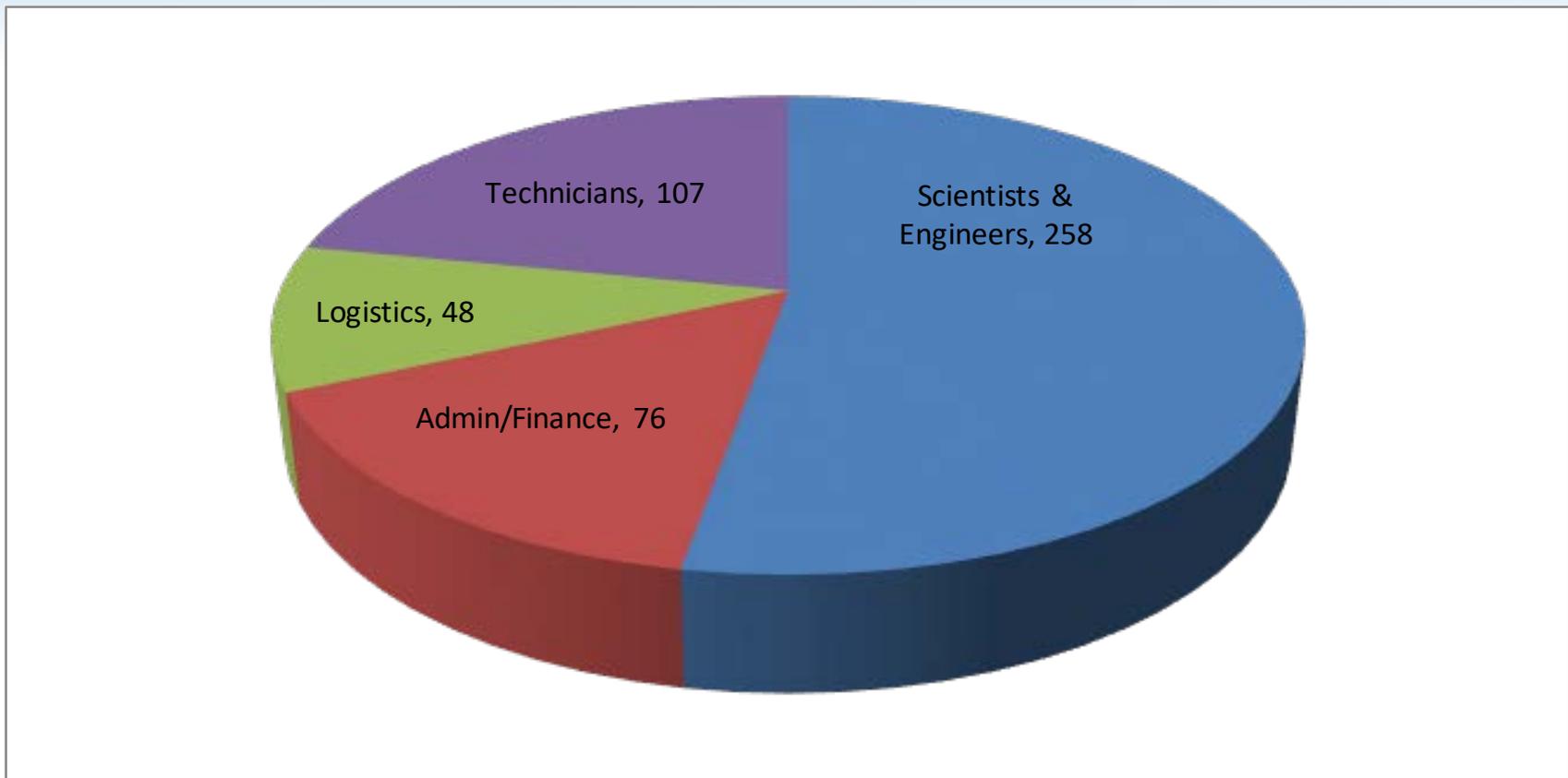
FUNDING BY Sponsor



Projected Contract \$



Contractor Personnel Profile



Projected Code 25 Contracts

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Task Description	Current Contract #	Pending Value (\$M)	Incumbent	Strategy	Action Type	RFP Release FY Qtr Date
(CODE 25) TSP Support	N00178-05-D-4455/N401	\$12.0	MIKEL INC.	SBSA	Seaport	2019 QTR 1
(CODE 25) Code 25 CM/ILS Support	N00178-14-D-7834/N401	\$45.4	MIKEL INC.	SBSA	Seaport	2019 QTR 1
(CODE 25) Program Management Support	N00178-04-D-4136/N410	\$10.2	SYSTEMS RESOURCE MANAGEMENT INC	SBSA	Seaport	2019 QTR 2
(CODE 25) Trident DPS	N66604-16-D-0908	\$4.6	SYSTEMS ENGINEERING ASSOCIATES CORPORATION, DBA SEA CORP	TBD	IDIQ	2019 QTR 2
(CODE 25) Code 25 Strike Support	N00178-04-D-4122/N439	\$74.1	SYSTEMS ENGINEERING ASSOCIATES CORPORATION, DBA SEA CORP	Unrest	Seaport	2019 QTR 2
(CODE 25) Code 25 VA Special Projects/ Payloads	N00178-04-D-4122/N438	\$21.1	SYSTEMS ENGINEERING ASSOCIATES CORPORATION, DBA SEA CORP	Unrest	Seaport	2019 QTR 3
(CODE 25) SOBT Support Services	N00178-04-D-4136/N413	\$12.0	SYSTEMS RESOURCE MANAGEMENT INC	TBD	Seaport	2019 QTR 3

Projected Code 25 Contracts (Cont.)

Task Description	Current Contract #	Pending Value (\$M)	Incumbent	Strategy	Action Type	RFP Release FY Qtr Date
(CODE 25) In-Service Platform Contract	N00178-14-D-7834/N66604-17-F-3000	\$25.0	MIKEL INC.	TBD	Seaport	2020 QTR 1
(CODE 25) SMMTT/Trainer Development	N00178-04-D-4091/N410	\$74.0	NORTHROP GRUMMAN SPACE & MISSION SYSTEMS CORP.	TBD	Seaport	2020 QTR 1
(CODE 25) XTDA Follow-On Contract	N66604-15-D-0131	\$25.0	SYSTEMS ENGINEERING ASSOCIATES CORPORATION, DBA SEA CORP	TBD	IDIQ	2020 QTR 1
(CODE 25) DARTS Follow-On Contract	N66604-15-D-0130	\$25.0	PROGENY	TBD	IDIQ	2020 QTR 1
(CODE 25) Virigina/Columbia Class/SWFTS Support	N00178-04-D-4122/N66604-17-F-3003	\$30.0	SYSTEMS ENGINEERING ASSOCIATES CORPORATION, DBA SEA CORP	TBD	Seaport	2020 QTR 1
(CODE 25) Norfolk IV&V	N00178-14-D-7831-N401	\$2.0	MI TECHNICAL SOLUTIONS, INC.	TBD	Seaport	2020 QTR 1
(CODE 25) SUBLAN/CANES Development	N00178-14-D-7578/N66604-18-F-3005	\$12.0	LEIDOS, INC.	TBD	Seaport	2020 QTR 3
(CODE 25) IMI Courseware	N66604-14-D-231A/B/C/D	\$9.0	SONALYSTS INC., AMSEC, DELEX SYSTEMS INC. URS	TBD	IDIQ	2020 QTR 3

QUESTIONS?

Functional Mailbox

[NUWC NPT Code25 info.fct@navy.mil](mailto:info.fct@navy.mil)

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