



# 25

## UNDERSEA WARFARE COMBAT SYSTEMS

### Code 25 Industry Day Brief

*21 May 2025*



- Introduction/Ground Rules
- Disclaimer Statement
- Background Information on Code 25
- Laboratory and Advanced Interactive Management Technology Center (AIMTC) Support RFP N66604-25-R-3011
  - Anticipated Procurement Strategy
  - Technical Requirements
- Combat Control Systems RFP N66604-25-R-3009
  - Anticipated Procurement Strategy
  - Technical Requirements
- Conclusion/Wrap-Up

- Introduction of participants
  - NUWCDIVNPT Technical Code 25
  - NUWCDIVNPT Contracts Department
- Intent of Industry Day
  - Encourage competition by:
    - Ensuring all potential offerors receive and have access to the same information
- Technical “Q&A” is encouraged
  - Q&A (all questions submitted in writing) will be answered via the SeaPort-NxG Portal

- No personal recording
- The Q&A and “Distribution Statement A” slides will be posted to the SeaPort-NxG portal and the Contracting & Office of Small Business Outreach page
  - Link: <https://www.navsea.navy.mil/Home/Warfare-Centers/NUWC-Newport/Partnerships/Contracting-and-Small-Business/Outreach-Events/>

- DO NOT directly contact NUWC technical code after today – all further dialogue will be accomplished via the Q&A feature on the SeaPort-NxG portal
- Requirements contained in this briefing are presented as a summary

*Full/updated requirements will be provided in the Requests for Proposal (RFP)*

# Disclaimer Statement

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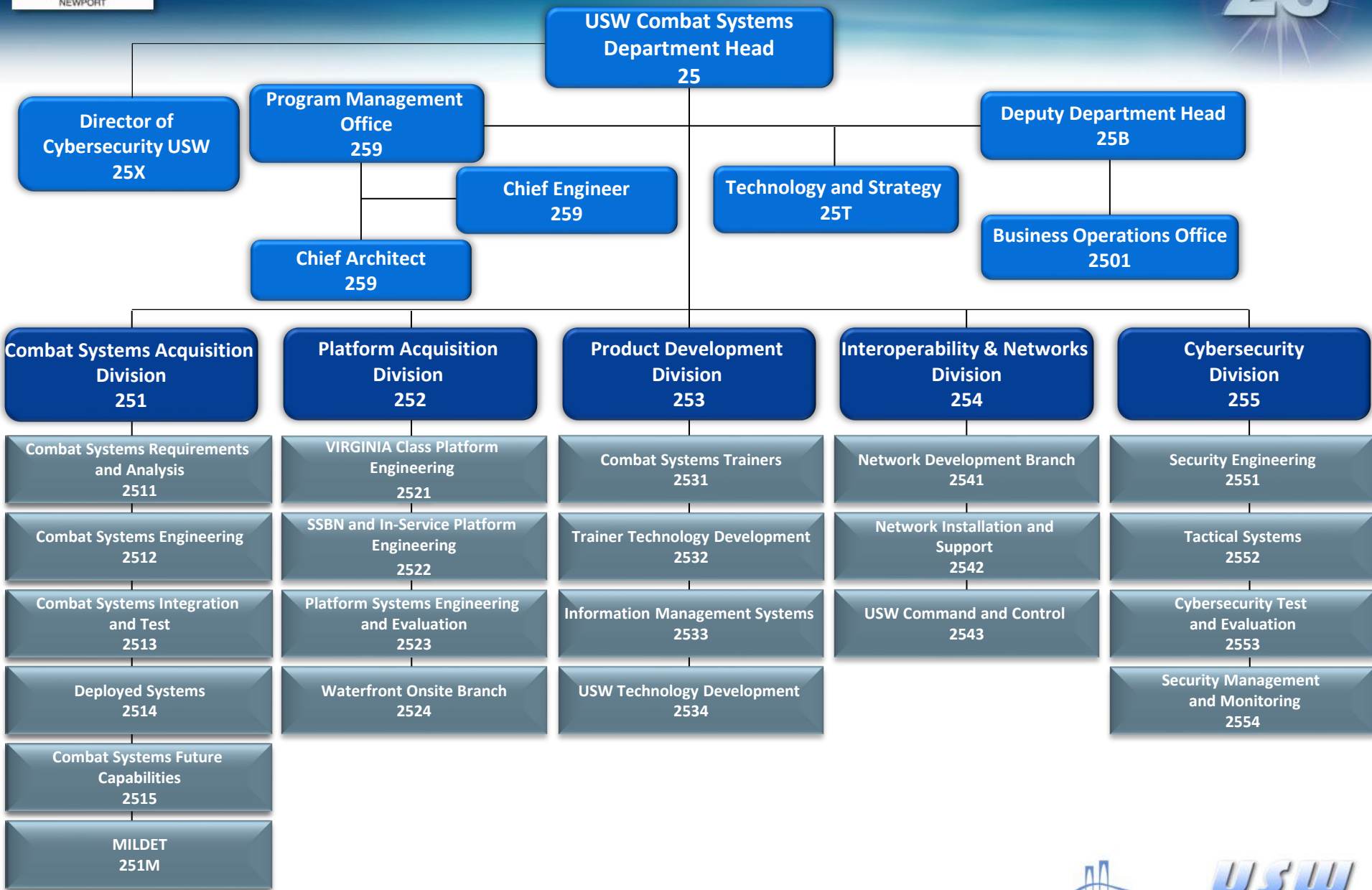
- Remarks today by Government officials involved in today's presentations should not be considered a guarantee of the Government's course of action in proceeding with any of the planned acquisitions discussed
- The informational briefing shared today reflects current Government intentions and is subject to change based on a variety of circumstances

*The formal solicitation, when issued, is the only document that should be relied upon in determining the Government's requirements*



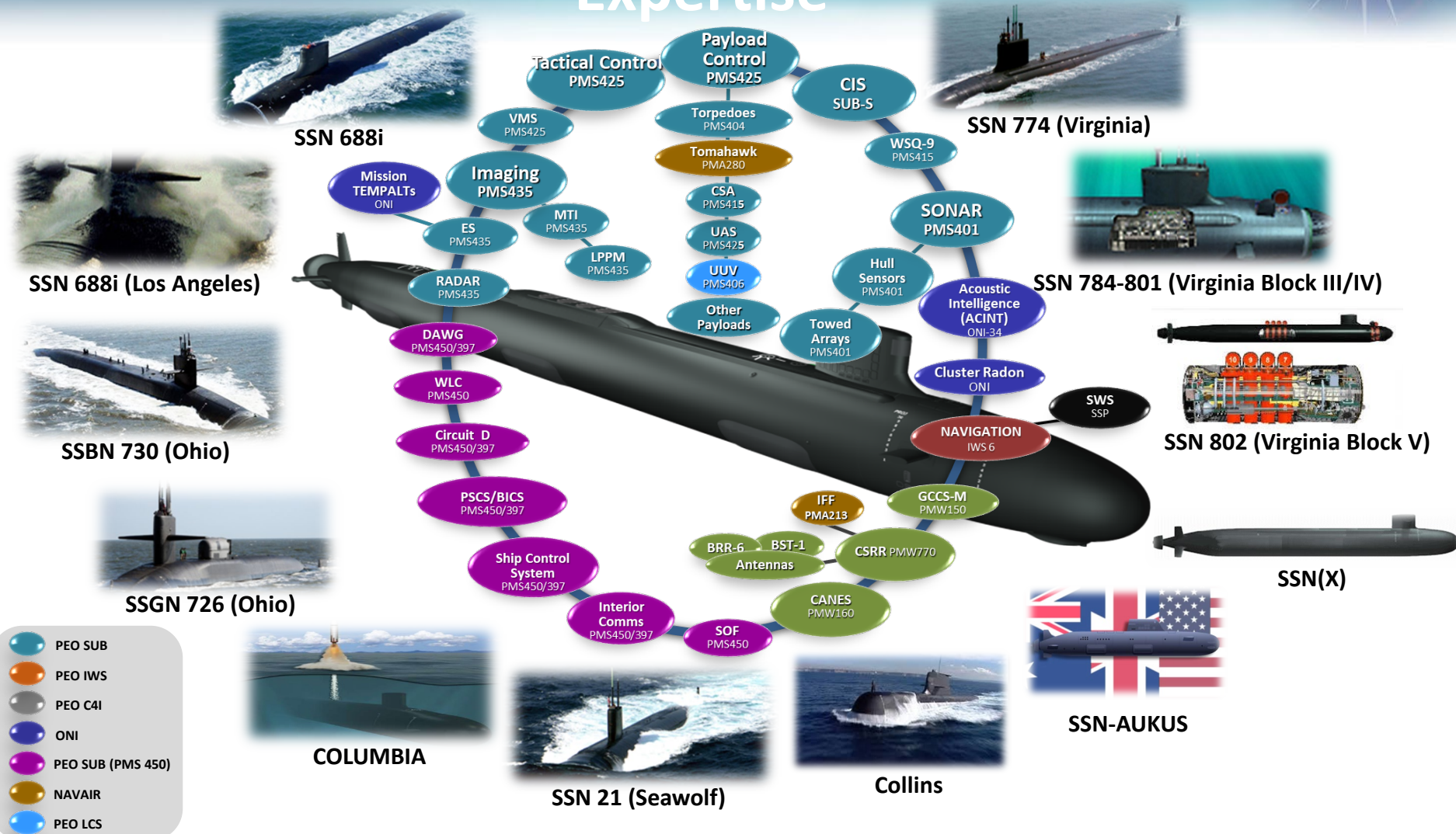
# USW Combat Systems Department

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# System of Systems (SoS) Engineering Expertise

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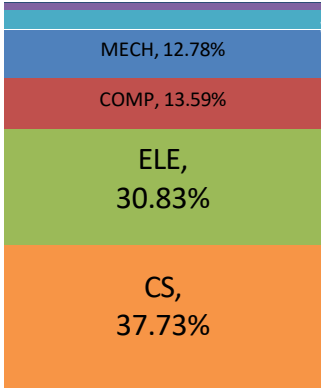
Executing Technical Authority Across Programs, Platforms, and System of Systems



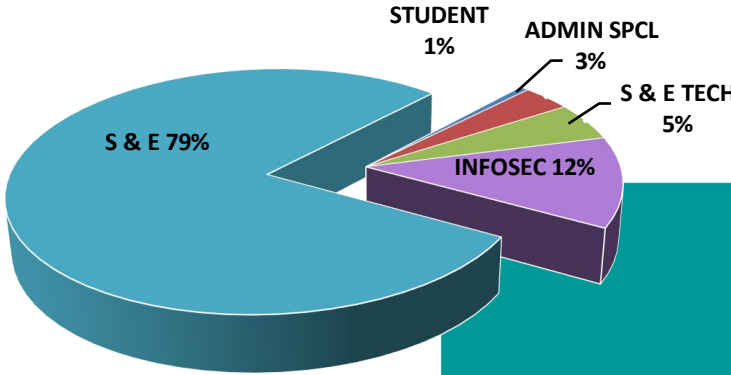
# Our People – Skilled Workforce

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DATA, 0.20%



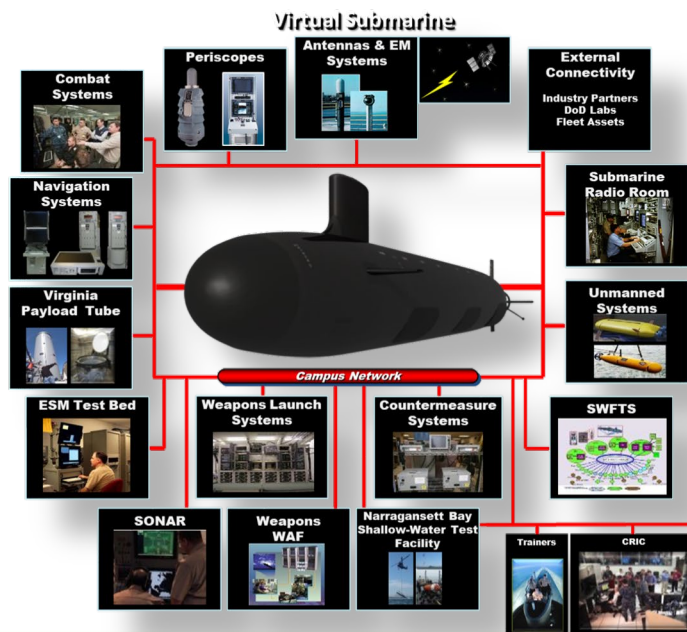
- Development Opportunities**
- Academic Degree Program: 20
  - Naval Postgraduate School: 5
  - Fellowship: 1 (FY23)
  - New Professional 219 Projects: 9



## Education Profile



- Powerful technical resource enabling prototyping, experimentation, development, integration and test, training, assessment, & certification
- Complement to workforce expertise
- Product lifecycle support for over 20 projects



- External linkages via Wide Area Integration Facility (WAIF) to facilitate industry partnerships and promote efficient development and integration of new capabilities
- Core component of Virtual Submarine – Campus-wide connectivity of Division Newport facilities



# USW Combat Systems Programs

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Our Value

## Bridge to the Fleet

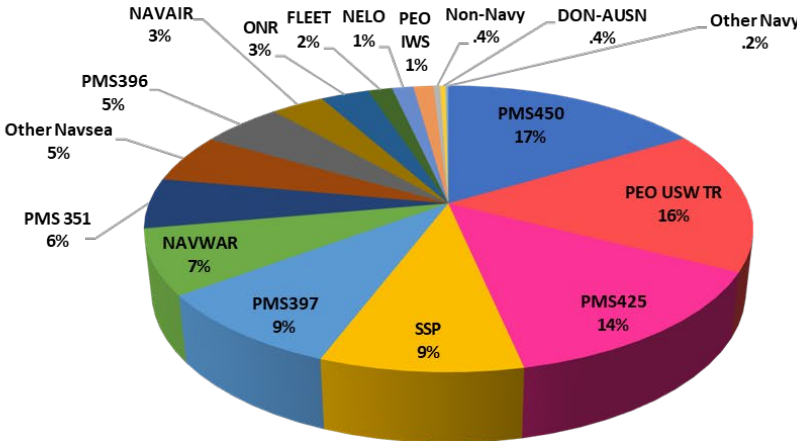


**Diverse Set of Customers Across SYSCOMs, ONR and the Fleet**

- SSN(X) Concept Definition/Exploration
- Naval Tactical Cloud
- UxS Common Control System
- ONR Decision Superiority
- ONR Integrated Naval Prototypes
- Human Factors Engineering
- Cyber Security (Zero Trust and Multi Level Security)
- Combat Systems Hardware/Software/Network Architectures
- Combat System Arrangements
- Virginia Block VI/VII, SSN(X) and SSN AUKUS
- Combat Systems Virtualization
- SWFTS Re-architecture
- Live/Virtual/Constructive (LVC)
- Third Party Targeting and Cueing (3PT/C)
- Unmanned Aerial Systems Family of Vehicles (Small/Medium)
- Undersea Dominance Payload Prototyping
- AN/BYG-1 CI/CID Pipeline
- Cyber Security Systems Engineering
- VA MOD SSW (Mission Electronic Systems)
- Undersea Constellation
- AN/BYG-1
- TTWCS
- Conventional Prompt Strike (CPS)
- Virginia
- Columbia/Ohio
- Trainers (SMMTT, SBT)
- SWFTS
- Submarine CANES
- USW Strike
- International Programs
- Cybersecurity
- USW DSS
- Project Overmatch
- SSN AUKUS
- Submarine Combat Systems ISEA
- Ohio/Seawolf ISEA
- Tomahawk Logistics and Fleet Support
- SSGN Attack Weapon Control System
- Operational Documentation
- Trainer On Site Agents
- GCCS-M
- NTMPS
- SEAWARE-LMS/SOBT
- Wartime Readiness
- Cyber Accreditation

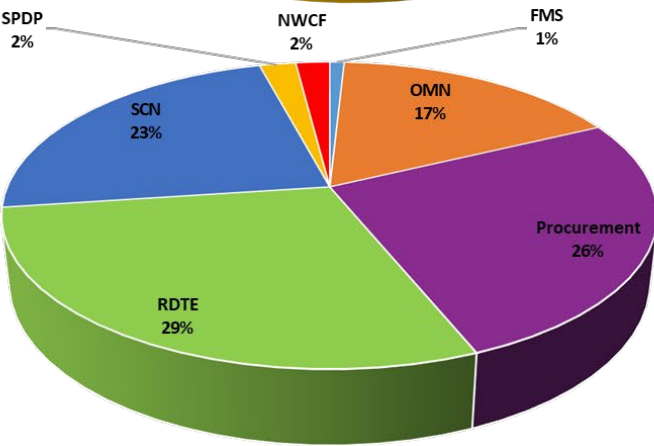
## Funding Profile by Customer

*New Customers*  
• *SSN AUKUS*



## Funding Profile by Appropriation

*Continue to Increase RDTE*



\$388M\* Plan for FY25  
\*FY24 TCHA data



*Steady demand for our products and services...9% increase over 2024*

# **Code 25 Laboratory and Advanced Interactive Management Technology Center (AIMTC) Support**

**RFP N66604-25-R-3011**

**Predecessor RFP N66604-20-R-3012**



# Code 25 Lab and AIMTC Support Anticipated Procurement Strategy

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- **Summary of Contract Scope:**

- Operational, technical and engineering services in support of the infrastructure, systems and laboratories assigned to the Undersea Warfare Combat Systems Department, Code 25. The facilities, including laboratories, are located in three distinct buildings on the NUWCDIVNPT campus. The C25 laboratories are operational 24 hours a day, 365 days a year. The services under this task order support C25 Infrastructure Support; C25 Media Center; and Advanced Interactive Management Technology Center (AIMTC). AIMTC provides the Department of Navy (DoN) and all its activities, support agencies and contractors with an interactive web-based system for inputting, managing, retrieving and displaying Submarine Warfare Systems (SWS) configuration, logistics, alteration, planning and system engineering data.

- RFP: N66604-25-R-3011
- Predecessor RFP N66604-20-R-3012
- Contracting Method: SeaPort NxG
- Anticipated Period of Performance: 05/01/2026 – 04/30/2031
- Acquisition Strategy: TBD
- Level of Effort: Estimated 140,580 hours CPFF, 193,050 hours FFP, & \$226,177 ODCs
- Anticipated Work Location: 99% Government Site, 1% Contractor Site
- Contract Type: CPFF

# Code 25 Lab and AIMTC Support Anticipated Procurement Strategy (continued)

25

- Unique Characteristics:
  - Key Personnel requirements: Minimum of six (6) Key Personnel (plus the Senior Technical Representative (STR)) to Cover Designated Areas of Expertise
  - Facility Security Clearance: Secret
  - Level of Safeguarding Required at Contractor Facility: None
  - Required Certifications/Designations: IAT (Information Assurance Technical) Level II certification for 2 of the Key Personnel

# Code 25 Lab and AIMTC Support Anticipated Procurement Strategy (continued)

25

- Unique Characteristics (continued):
  - Other Direct Costs (ODCs) details: ODCs primarily for incidental materials required for tasking, small amount for travel
  - Follow on? Yes, follow-on to N00178-19-D-8122/N66604-21-F-3004, MIKEL Inc., Acquisition Strategy was Small Business Set-Aside
  - Does OCOI clause apply? Yes
  - Expected RFP release: FY25 QTR 4

# Code 25 Lab and AIMTC Support Technical Requirements

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- Background:
  - The Naval Undersea Warfare Center Division, Newport (NUWCDIVNPT), Undersea Warfare Combat Systems Department, Code 25 provides lifecycle facilities engineering and infrastructure operations and maintenance support for the Combat Control Systems (CCS), CCS trainer systems, and associated Non-Propulsion Electronics System (NPES) hardware and software products.
  - The Undersea Warfare Combat Systems Department is responsible for the operations and maintenance of its facilities. These continuously operating facilities are the department's principal material asset for supporting fleet systems development, evaluation, and problem resolution.

# Code 25 Lab and AIMTC Support Technical Requirements

25

- Scope:
  - The contractor shall provide operational, technical and engineering services in support of the infrastructure, systems and laboratories assigned to the Undersea Warfare Combat Systems Department, Code 25. The facilities, including laboratories, are located in three distinct buildings on the NUWCDIVNPT campus. The C25 laboratories are operational 24 hours a day, 365 days a year.
  - The services under this task order support C25 Infrastructure Support; C25 Media Center; and Advanced Interactive Management Technology Center (AIMTC). AIMTC provides the Department of Navy (DoN) and all its activities, support agencies and contractors with an interactive web-based system for inputting, managing, retrieving and displaying Submarine Warfare Systems (SWS) configuration, logistics, alteration, planning and system engineering data. This includes DoD, Fleet, SYSCOMS, foreign partners, industry partners, and academia.



# Code 25 Lab and AIMTC Support Technical Requirements

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- High Level SOW Tasking:
  - 4.1 Code 25 Infrastructure Support (FFP)
    - Staff the C25 Infrastructure Support Team with a minimum of one person at each of the three C25 laboratory locations on a continuous basis from 0700 – 1700 Monday through Friday (excluding federal holidays and base closures).
    - Provide escort services.
    - Monitor the status of all Code 25 Facilities.
    - Submit Trouble Calls to cognizant NUWCDIVNPT personnel.
    - Install Code 25 Laboratory Tactical Shipsets.
    - Design and fabricate infrastructure modifications and equipment upgrades.
    - Perform incoming and outgoing inspections per a Quality Assurance checklist.
    - Troubleshoot malfunctioning equipment in the lab to determine the root cause.
    - Fabricate, modify, and install stands, wall mounts, and Unistrut assemblies.
    - Install shipboard equipment.
    - Repair previously installed lab equipment as needed.
    - Fabricate, modify, install, and repair Electronic Auxiliary Fresh Water (EAFW)/Water Cooled equipment and assemblies.
    - Prepare equipment for shipment.
    - Receive incoming equipment using Government provided material handling equipment, cranes, hoists, and slings.
    - Provide one in person staff for the C25 Classified Rapid Innovation Center (CRIC) 0830-1700 Monday through Friday (excluding federal holidays and base closures).
    - Act as a secure space custodian for the purpose of opening and closing the CRIC.

# Code 25 Lab and AIMTC Support Technical Requirements

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- 4.2 Code 25 Media Center Operations (FFP)
  - Staff two (2) of the Code 25 Lab Media Centers with a minimum of one person 24 hours per day 7 days per week and one (1) C25 Lab Media Center 0600 – 2000 Monday thru Friday (excluding federal holidays and base closures).
  - Enter, track, distribute, and account for classified material held within the C25 Media Center.
  - Conduct inventories of all C25 department media holdings (yearly basis or upon notification).

# Code 25 Lab and AIMTC Support Technical Requirements

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- 4.3 Advanced Interactive Management Technology Center (AIMTC) Systems (CPFF)
  - Customer Support Services
    - Respond to support inquiries, address customer questions, troubleshoot issues, and provide general information about website hosting services.
    - Maintain detailed records of account requests using the AIMTC ticketing system
    - Create new instructional documents and review existing instructional documents.
    - Make recommendations for process improvements.
    - Attend the weekly Customer Service team meetings.
  - Technical Writing
    - Create and maintain software development documentation.
    - Manage and maintain version control of software development documentation.
    - Attend development stand-up meetings.
    - Map workflows during the software development phase.
    - Prepare new Policies and Procedures.
    - Conduct Usability Testing.

# Code 25 Lab and AIMTC Support Technical Requirements

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- 4.3 Advanced Interactive Management Technology Center (AIMTC) Systems (CPFF) (continued)
  - Software Engineering
    - Develop, design, and maintain web applications.
    - Gather and analyze requirements for web applications.
    - Prioritize code quality, readability, maintainability, efficiency, using appropriate data structures and algorithms.
    - Utilize standardized software engineering principles.
    - Participate in peer code reviews.
    - Maintain and enhance existing applications.
    - Integrate and maintain databases.
    - Prepare documentation for software solutions.
    - Maintain DoD Information Technology Portfolio Repository – Department of the Navy (DITPR-DON).
    - Evaluate the impact of approved change requests on performance.
    - Develop and implement a plan to ensure 508 compliance.
    - Submit code using the Continuous Integration/Continuous Deployment (CI/CD) pipeline tools.

# Code 25 Lab and AIMTC Support Technical Requirements

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- 4.3 Advanced Interactive Management Technology Center (AIMTC) Systems (CPFF) (continued)
  - Manage and Maintain Computer Systems
    - Perform routine system updates, patches, and configuration changes.
    - Create, modify, and deactivate user accounts.
    - Monitor system performance, troubleshoot issues, and optimize system operations.
    - Implement and maintain backup and recovery procedures.
    - Enforce security policies, monitor for security breaches, and respond to incidents.
    - Conduct cyber analysis.
    - Install and integrate updates, fixes, and enhancements.
    - Manage system assets to ensure performance, capacity, and availability.
    - Document systems administration and technical support.
    - Install, configure, and maintain web servers using Internet Information Services (IIS) or Apache.
    - Ensure data integrity and consistency.



# Code 25 Lab and AIMTC Support Technical Requirements

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- 4.3 Advanced Interactive Management Technology Center (AIMTC) Systems (CPFF) (continued)
  - Develop and Implement Power Platform Analytics Solutions
    - Collaborate with AIMTC Customers to document customer's business requirements.
    - Conduct a thorough analysis of the customer's business requirements.
    - Design and implement workflows and dashboards utilizing Power Automate, Power BI, and other Microsoft tools.
    - Map workflows and define policies within the Microsoft Power platform applications.
    - Create comprehensive documentation of all designed workflows.
    - Provide training and support as part of the delivery of the power platform application.

# Code 25 Lab and AIMTC Support Technical Requirements

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- 4.4 Infrastructure Support Operations and Maintenance (Surge) (CPFF)
  - Provide escort services for visitors to code 25 secure and non-secure spaces outside of the normal laboratory business hours.
  - Perform surge Infrastructure Support.
- 4.5 Cybersecurity Workforce (CWF) (CPFF)
  - Personnel performing cyber functions maintain proper training and qualifications, and provide a monthly CWF report on compliance.

# Code 25 Lab and AIMTC Support Key Personnel Requirements

25

**Required Key Personnel, covering the below areas of expertise. Minimum of six (6) Key Personnel plus the STR; offerors shall provide proposed list of Key Personnel that covers all of the required areas of expertise.**

**Offerors shall propose the total key personnel required and shall propose each key person with all of the proficiencies and experience requirements per Area of Expertise.**

# Code 25 Lab and AIMTC Support Key Personnel Requirements

25

## **(1) SOW Task 4.1.1 (Code 25 Infrastructure Support Operations and Maintenance) - 1 Key Person.**

### **Required Qualifications:**

- 1-5 years experience with installation and test of combat and weapon systems
- 1-5 years experience working in a computer and a test and evaluation laboratory with shipboard equipment and configurations
- Material Handling Equipment (MHE) qualified for pallet/bottle jacks, table lifts and similar load bearing equipment
- 1-5 years of laboratory HVAC equipment and chill water systems. This includes global, stand-alone, as well as supplemental systems
- NAVOSH (Navy Occupational Safety and Health) trained and qualified in use of to include drill presses, banding and electric saws
- 1-5 years of experience and demonstrated proficiency in managing the work schedules of several personnel

### **Desired Qualifications:**

- 1-5 years experience with installation and test of submarine combat and weapon systems
- 1-5 years experience working in a computer and a test and evaluation laboratory with shipboard equipment and configurations related to US Navy submarines

## **(2) SOW Task 4.2.1 (Code 25 Media Center Operations) - 1 Key Person.**

### **Required Qualifications:**

- 1-5 years experience media classification marking requirements/guidelines.
- 1-5 years of experience and demonstrated proficiency in managing work schedules of several personnel

# Code 25 Lab and AIMTC Support Key Personnel Requirements

25

**(3-4) SOW Task 4.3.3 (AIMTC Software Engineering) - 2 Key Personnel (each of the two proposed Key Personnel must meet all required qualifications).**

## **Required Qualifications:**

- A minimum of 5 Years experience developing software with React;
- A minimum of 5 Years experience using Git and branching strategies;
- A minimum of 5 Years experience with Agile methodologies;
- A minimum of 3 Years experience utilizing Containers;
- A minimum of 3 Years experience developing software in a cloud environment.

## **Desired Qualifications:**

- A minimum of 5 Years experience developing software with PHP: Hypertext Processor.
- A minimum of 7 Years experience developing software with React



# Code 25 Lab and AIMTC Support Key Personnel Requirements

25

**(5) SOW Task 4.3.4 (AIMTC Manage and Maintain Computer Systems) - 1 Key Person.**

**Required Qualifications:**

- A minimum of 5 years experience as a system administrator in a cloud environment
- A minimum of 2 Years experience in Installing and configuring web servers
- A minimum of 1 year experience with PKI (Public Key Infrastructure) implementation and best practices
- IAT (Information Assurance Technical) Level II certification

**Desired Qualifications:**

- A minimum of 1 year experience with Continuous Integration/Continuous Delivery (CI/CD) pipeline

**(6) SOW Task 4.3.5 (AIMTC Develop and Implement Power Platform Analytics Solutions) - 1 Key Person.**

**Required Qualifications:**

- A minimum of 5 years experience in database administration on enterprise level databases.
- IAT (Information Assurance Technical) Level II certification

# **Code 25 Combat Control Systems**

**RFP N66604-25-R-3009**

**Predecessor RFP N66604-22-R-3000**

# Code 25 Combat Control Systems Anticipated Procurement Strategy

25

- Summary of Contract Scope:
  - Engineering, technical, and administrative services in support of NUWCDIVNPT Undersea Warfare Combat Systems Department (Code 25) Combat Control System projects, including advanced development, hardware and software engineering, systems engineering (including advanced model-based systems engineering), system integration and test, fleet support, lab support and administrative services in support of AN/BYG-1 modernization and new construction. System evaluation requires operation of International Combat Systems and variants including Australia, Brazil, Canada, Netherlands, Taiwan, United Kingdom and Turkey.
- RFP: N66604-25-R-3009
- Predecessor RFP N66604-22-R-3000
- Contracting Method: SeaPort NxG
- Anticipated Period of Performance: 05/23/2026 – 05/22/2031
- Acquisition Strategy: Unrestricted
- Level of Effort: Estimated 768,000 hours & \$3,418,820 ODCs
- Anticipated Work Location: 87% Government Site, 13% Contractor Site
- Contract Type: CPFF

# Code 25 Combat Control Systems Anticipated Procurement Strategy (continued)

25

- Unique Characteristics:
  - Key Personnel requirements: Minimum of eight (8) Key Personnel (inclusive of Senior Technical Representative (STR)) to Cover Designated Areas of Expertise
  - Facility Security Clearance: Top Secret
  - Level of Safeguarding Required at Contractor Facility: Secret
  - Required Certifications/Designations: Cybersecurity Workforce (CWF) tasking
  - Software Development Plan (SDP) required

# Code 25 Combat Control Systems Anticipated Procurement Strategy (continued)

25

- Unique Characteristics (continued):
  - Direct Costs (ODCs) details: ODCs for travel and incidental materials required for tasking
  - Follow on? Yes, follow-on to N00178-19-D-8424/N66604-22-F-3014, Rite-Solutions, Inc., Acquisition Strategy was Small Business Set-Aside
  - Does OCOI clause apply? Yes
  - Expected RFP release: FY25 QTR 4



# Code 25 Combat Control Systems

## Technical Requirements

25

- Background:

- The Naval Undersea Warfare Center Division, Newport, (NUWCDIVNPT) Undersea Warfare (USW) Combat Systems Department (Code 25) provides full-spectrum systems engineering for the development, implementation and sustainment of New Construction and In-service Submarine Combat Control Systems. NUWCDIVNPT Code 25 also serves as the Technical Direction Agent (TDA) and In-service Engineering Agent (ISEA) for applicable Combat Control Systems. Current combat control systems include AN/BYG-1 Combat Control System (CCS), Foreign Military Sales (FMS) systems, Australia/United Kingdom/United States (AUKUS), International Combat Systems (ICS) and future follow-on combat control systems and related subsystems.
- The AN/BYG-1 Combat Control System consists of Tactical Control, Weapon Control, Payload Control, Information Assurance (IA), related subsystems, applications, networks, and capabilities for all USN and Royal Australian Navy (RAN) variants. System evaluation requires operation of all AN/BYG-1 variants, interfacing non-propulsion electronic systems, submarine networks, external communications, sensors, navigation systems, weapons, Strategic Systems Programs (SSP) unique systems, test equipment and weapon simulators.
- The FMS, AUKUS, and International Combat Systems (ICS) consist of all or parts of Weapon Control, Payload Control, Tactical Control, Tube Control and Sonar that allow foreign militaries to prosecute targets and fire variants of the USN ADCAP Mk48 torpedoes.

# Code 25 Combat Control Systems Technical Requirements

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- Scope:
  - Provide engineering, technical, and administrative services in support of NUWCDIVNPT Undersea Warfare Combat Systems Department (Code 25) projects and program customers. The scope of this requirement shall include advanced development, hardware and software engineering, systems engineering (including advanced model-based systems engineering), system integration and test, fleet support, lab support and administrative services in support of AN/BYG-1 modernization and new construction. System evaluation requires operation of all International Combat Systems and variants including Australia, Brazil, Canada, Netherlands, Taiwan, United Kingdom and Turkey. Tasking may include external communications, navigation systems, sonar arrays, weapons and other legacy subsystems as well as weapon simulators and test equipment.
  - The scope of the combat control system effort includes the AN/BYG-1 Combat Control System, Payload programs that integrate into the AN/BYG-1 combat system, Tactical Tomahawk Weapon Control System (TTWCS), new construction submarine programs, Submarine Warfare Federated Tactical Systems (SWFTS), International Programs, AUKUS, and Cyber combat control system support.

# Code 25 Combat Control Systems Technical Requirements

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- High Level SOW Tasking:
  - 4.1 Advance Development Services
    - Technical investigation and evaluation of new technology.
    - Design and operational concept development and prototyping.
  - 4.2 Systems Engineering Services
    - Development, review, and update of requirements specifications.
    - Technical investigations.
    - Technical reviews.
    - Risk assessment.
    - Qualification and suitability.
    - Software engineering and development.

# Code 25 Combat Control Systems Technical Requirements

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- 4.3 Hardware & Alteration Engineering Services
  - Power system engineering.
  - Preparation of alteration documentation.
  
- 4.4 Integration & Test Services
  - Test planning.
  - Procedure development.
  - Laboratory integration and testing.
  - Dockside and at-sea testing.
  - Readiness review documentation.
  - Data reduction and analysis of Combat System testing.
  - Concept of employment and tactical guidance development.

# Code 25 Combat Control Systems Technical Requirements

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- 4.5 Fleet Support Services
  - Investigation and resolution of fleet problems.
  - Installation, checkout (INCO) and training.
  - Field support.
  - Procedural documentation.
  - Documentation development.
  - Documentation sustainment.
  - Documentation promulgation.
  - Watch bill support.
  
- 4.6 Laboratory Support Services
  - Laboratory hardware.
  - Preventative and corrective maintenance.
  - System/subsystem technical support.
  - Parts compatibility, obsolescence and inventory.



# Code 25 Combat Control Systems Technical Requirements

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- 4.7 Administrative Services
  - Weekly highlights
  - Meeting services.
  - Documentation preparation.
- 4.8 Cybersecurity Workforce (CWF)
  - Personnel performing cyber functions maintain proper training and qualifications, and provide a monthly CWF report on compliance.

# Code 25 Combat Control Systems

## Key Personnel Requirements

25

**Required Key Personnel inclusive of the STR, covering the below areas of expertise. (minimum of eight (8) Key Personnel inclusive of the STR; offerors shall provide proposed list of Key Personnel that covers all of the required areas of expertise).**

**Offerors shall propose the total key persons required and shall propose each key person with all of the proficiencies and experience requirements per Area of Expertise.**

# Code 25 Combat Control Systems

## Key Personnel Requirements

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### (1) SOW tasks 4.1-4.3 and 4.5-4.6: AN/BYG-1 Modernization Processes

#### Required Qualifications:

- Demonstrated experience with the AN/BYG-1 Systems Engineering Process;
- Demonstrated experience with the PEOSUB SWFTS Technology Insertion Hardware (TIH) Process
- Demonstrated experience with the PEOSUB SWFTS Integration and Test process
- Demonstrated experience with the Agile Systems Engineering process and DevSecOps, as referenced in SOW Applicable Document 3.27
- Demonstrated development of system requirements, concepts of operations (CONOPS), and specifications; requirements development and traceability
- Demonstrated experience with modification and development of OD44979 Firing Procedures

#### Highly Desired Qualifications:

- Demonstrated experience with the IWS Advanced Processor Build (APB) Process;
- Demonstrated experience with Model Based Systems Engineering
- Demonstrated experience with SSN(X) requirements analysis
- Demonstrated experience with Risk Management.

# Code 25 Combat Control Systems

## Key Personnel Requirements

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**(2) SOW Task 4.2: AN/BYG-1 Tactical Control Subsystem (TCS) Weapon Control Subsystem (WCS) Payload Control Subsystem (PCS), and Integrated Products (IP) Components**

### Required Qualifications:

- **Demonstrated experience in AN/BYG-1 TCS, WCS, PCS, and IP component software and hardware architecture, interfaces, and related specifications, and critical threads;**
- **WCS and PCS Domain functional experience including:**
  - o Torpedo operations,
  - o Missile operations, and
  - o Launcher/Launch Interfaces.
  - o OD44979 Firing Procedures
- **TCS Domain functional experience including:**
  - o Solution development,
  - o Target Motion Analysis (TMA)
  - o Sensor and Contact management, and
  - o Fusion plots
- **IP Domain functional experience:**
  - o Network and infrastructural services, and
  - o Navy Electronic Chart Display & Information Systems (ECDIS) and Voyage Management System integration.
  - o Experience with Mission Planning Application (MPA)
  - o AN/BYG-1 Common Infrastructure Services (CIS) experience, specifically with operation of Non-Developmental Items (NDIs) transitioning out of CIS in TI24 APB23.

# Code 25 Combat Control Systems

## Key Personnel Requirements

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(2) SOW Task 4.2: AN/BYG-1 Tactical Control Subsystem (TCS) Weapon Control Subsystem (WCS) Payload Control Subsystem (PCS), and Integrated Products (IP) Components (continued)

### Highly Desired Qualifications:

- Demonstrated experience with the development of AN/BYG-1 system enhancements pertaining to the TCS, WCS, PCS and IP Components;
- WCS and PCS Domain functional experience including:
  - o Unmanned Vehicle (UxV) operations
  - o Strike support components integration, and
  - o OD44979 Firing Procedures and Weapon safety.
- TCS Domain functional experience including:
  - o Mission planning.
- IP Domain functional experience:
  - o Team Training with single/multiple subsystems, and
  - o System management services.



# Code 25 Combat Control Systems

## Key Personnel Requirements

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### (3) SOW Task 4.2: AN/BYG-1 System Architecture

#### Required Qualifications:

- Experience with Combat System architecture, video distribution, networks and technologies;
- Experience with network and enterprise level virtualization and containerization;
- Experience with Linux Operating System

#### Highly Desired Qualifications:

- Experience with Service Oriented Architecture and Platform as a Service (PaaS);
- Experience with architecture tools (including MBSE and SDKs);
- Experience with PaaS and Cloud orchestration technologies
- Experience with emergent technologies and industry wide standards. Familiarity with software development processes as referenced in SOW Applicable Documents 3.4, 3.22, 3.27 and CMMI.

# Code 25 Combat Control Systems

## Key Personnel Requirements

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### (4) SOW Task 4.2 and 4.3: AN/BYG-1 Hardware Engineering

#### Required Qualifications:

- Experience with Technology Insertion (TI) hardware architecture, interfaces, and related specifications;
- Experience with environmental qualification testing (EQT);
- Experience with Power Systems Engineering and Analysis;

#### Highly Desired Qualifications:

- Experience with AN/BYG-1 legacy combat systems (TI06 - TI14).

# Code 25 Combat Control Systems

## Key Personnel Requirements

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### (5) SOW Task 4.5: Submarine-specific Launcher and Systems

#### Required Qualifications:

- Virginia Class Submarine-specific:
  - o Experience with the BLK III/BLK IV Common Weapon Launcher (CWL);
  - o Experience with the BLK I/BLK II Weapon Launch Console Integrated Enclosure (WLCIE);
- Legacy Submarine-specific Launcher and Systems including:
  - o Experience with the Weapon Launch System for 688/688i;
  - o Experience with the Weapon Control Systems for SSGN & SSBN; and
  - o Experience with the Universal Weapon Launch (UWL) System for Seawolf class.

#### Highly Desired Qualifications:

- Virginia Class Submarine-specific:
  - o Experience with the Virginia Payload Tube (VPT);
  - o Experience with the Virginia Payload Module (VPM);
  - o Experience with the Payload Support Electronic System (PSES);
- Legacy Submarine-specific Launcher and Systems including:
  - o Experience with the Collins Weapon Data Converter (CWDC).

# Code 25 Combat Control Systems

## Key Personnel Requirements

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### (6) SOW Task 4.4: Integration and Test of Submarine Combat and Weapon Systems

#### Required Qualifications:

- Experience in the integration of AN/BYG-1 TCS, WCS, PCS, CIS, IA and IP hardware and software;
- Experience with AN/BYG-1 interface to SWFTS subsystems, SWFTS infrastructure, and services interactions;
- Experience with Linux, Windows and Java-based systems supporting software load, configuration, integration, troubleshooting, and maintenance
- Experience with networks and switches (ability to program, query and configure)
- Experience with Tactical Tomahawk Weapon Control System (TTWCS);
- Experience with Tomahawk Weapon Systems (TWS) interfaces and related specifications.

#### Highly Desired Qualifications:

- Experience with AN/BYG-1 Test procedures and approaches including Code and Unit Test (CUT), Integration Verification Test (IVT), Performance Verification Test (PVT), External Interface Test (EIT), Weapon Compatibility Test (WCT), SWFTS System Level Test (SLT) and System Longevity/Operability events
- Experience operating simulators/stimulators including Automated Test System Tactical (ATST), Multi Tube Weapon Simulator (MTWS), Onboard Team Trainer (OBTT), Ship/Submarine Environment and Missile Simulation (SEMS), Tactical Tomahawk Guidance Test Set (TTGTS/GTS), All-Up-Round Electronic Simulator (Mk 101 Mod 5, Mk112 Mod 0), Digital Missile Simulator MK 75 Mod 1, and PCS Launch Simulator (PLS)
- Experience with AN/BYG-1 Test processes including test plans, procedures reports, data collection, and analysis;
- Experience in laboratory and shipboard equipment and configurations (Submarine related) and the ability to install, troubleshoot, maintain and repair equipment & cabling.

# Code 25 Combat Control Systems

## Key Personnel Requirements

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### (7) SOW Tasks 4.1 - 4.6: Submarine Operations and Tactical Employment

#### Required Qualifications:

- Submarine operational and combat control system tactical experience;
- Experience with tactical weapons employment (torpedo and missile operations);
- Experience with in-service operations in direct support of fleet units deployed or ashore;
- Experience in training development and delivery in direct support of fleet units/personnel;
- Experience with development and maintenance of technical documentation related to submarine combat control systems, loading and handling systems, launchers and associated weapons.

#### Highly Desired Qualifications:

- Experience with concept of employment/operations.



- Thank you for your interest in the Code 25 Industry Day for the Code 25 Laboratory/AIMTC Support and Combat Control Systems Contracts
- If you are considering submitting a proposal for either of these procurements, **please provide a capability statement highlighting your qualifications for the procurement**
  - Email Maria Gregory at [maria.f.gregory.civ@us.navy.mil](mailto:maria.f.gregory.civ@us.navy.mil)
  - By COB Friday **23 MAY 2025**
  - Please indicate which procurement you are interested in or state both

# Conclusion/Wrap-Up

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- This briefing will be posted to the SeaPort NxG Portal and the Small Business Outreach page
- “Q&A” (today’s and subsequent) will be posted to the SeaPort NxG Portal
- DO NOT contact today’s presenters
  - All further dialogue will be accomplished via the Q&A feature on the SeaPort NxG Portal