



Naval Undersea Warfare Center Division, Keyport

100 Years of Kitsap and Navy History



***Mr. Alan Kent, SES
Division Technical Director***

***CAPT Doug LaCoste
Commanding Officer***

Department of Defense



President Obama
Commander in Chief

Secretary Carter
Secretary of Defense

Secretary Mabus
Secretary of the Navy

Admiral Richardson
Chief of Naval Operations

Vice Admiral Hilarides
*Commander
Naval Sea Systems Command*



**Regional
Maintenance
Centers**

Shipyards

**Supervisor of
Shipbuilding**

**Warfare
Centers**

NAVSEA Warfare Centers

**Technical Laboratory Operations that Equip and Support the Fleet
Expertise - Technology - Engineering Services - Products**

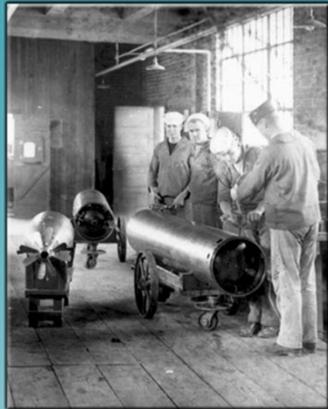


NUWC Keyport's Strategic Locations



Co-located with the Fleet, Keeping them Ready to Fight

Building on a Proud Heritage



1914

Pacific Coast
Torpedo Station
1914 – 1930

Torpedo Repair
**Torpedo Ranging
and Testing**
Torpedo School



1930

Naval Torpedo Station
1930 – 1978

**Major Center of Torpedo
Production and Testing During
WWII**
**Torpedoes Used by Submarines,
Aircraft, and Surface Ships**
**1944 – First Acoustic Testing
Range**
1956 – First 3-D Range



1978

Naval Undersea
Warfare Engineering
Station
1978 – 1991

**Growth of Test
and Evaluation
Functions**
**Tracking on
Multiple Ranges**
**Improved
Recovery
Techniques**



1992

Naval Undersea
Warfare Center Division,
Keyport
1992 to Present

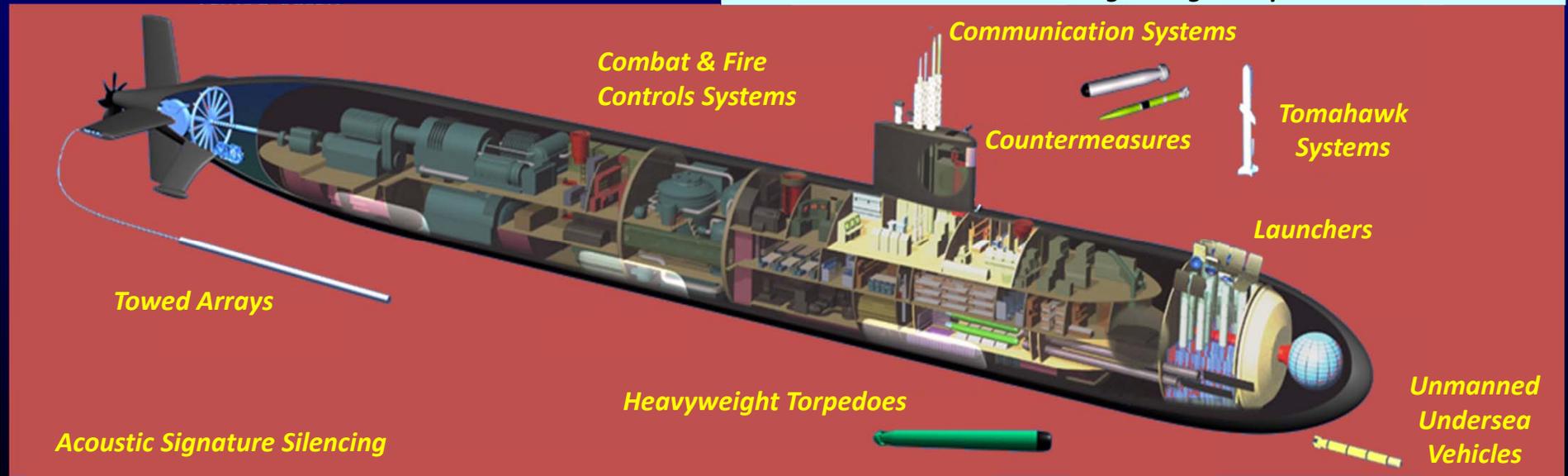
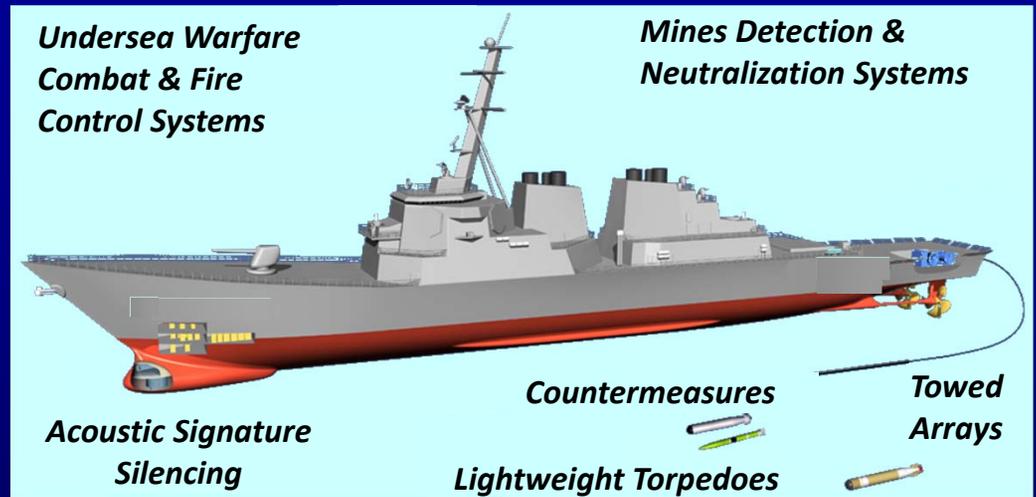
Test and Evaluation
**Engineering and Fleet
Support**
**Autonomous
Underwater Systems**
**Custom Engineered
Solutions**
Naval Sea Logistics Ctr

Growing Capabilities to Meet Fleet Needs

Undersea Warfare Support

Any battle system that travels, looks, listens or communicates underwater

**NUWC Keyport
primarily supports
these areas...**



Torpedo Town USA Legacy

- **Intermediate Maintenance Activity (IMA)**

- Systems level testing
- Only Lightweight Torpedo IMA
- Fully Certified Heavyweight Torpedo IMA



MK 46 Mod 5, Lightweight Torpedo



Heavyweight Exercise Torpedo

- **Nation's Only Torpedo Depot**

- Electronic and mechanical level repair



Shell Repair

In-Water Range Testing



Changing with the Winds of War

- Engineering Emphasis
 - Focus on undersea warfare weapon and combat systems
 - Provide:
 - Technical and logistics support
 - Hardware and software upgrades
 - Technical documents
 - Test equipment
 - Training
 - Obsolescence management
 - Custom engineered solutions
 - Ensure safety, reliability



Information Assurance & Cyber Support



CV(N) Warfare Systems



TIH Acquisition Support

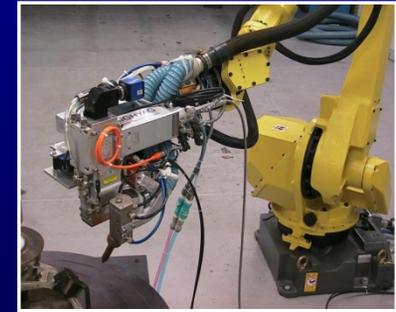


Alteration Installation Team (AIT) Support

- Replacement Parts, Repair
 - Utilize new technologies to make parts
 - Save money
 - Provide effective solutions
 - Examples:
 - Fabrication
 - Rapid prototyping
 - Reverse engineering (circuit boards, gyros)
 - 3-D printing
 - Laser cladding



*Emergent Custom
Engineered Solutions*



Laser cladding



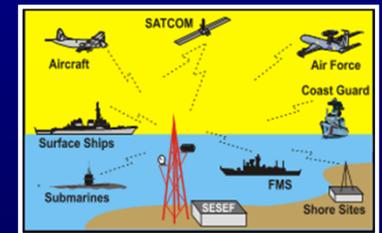
VLS Missile Tube Laser Repair

Pivot to the Pacific

- Increased military activity in the Pacific
- NUWC Keyport operations in San Diego, Pearl Harbor, San Diego, Guam and expanding
 - Operations & Support of Test Ranges
 - Technical Support for Waterfront & Fleet
 - Evaluation of Systems Testing
 - Fleet Test, Training and Evaluation
 - Heavy Weight Torpedo - Intermediate Maintenance Activity



Training, Test and Evaluation



Shipboard Electronic Systems Evaluation Facility

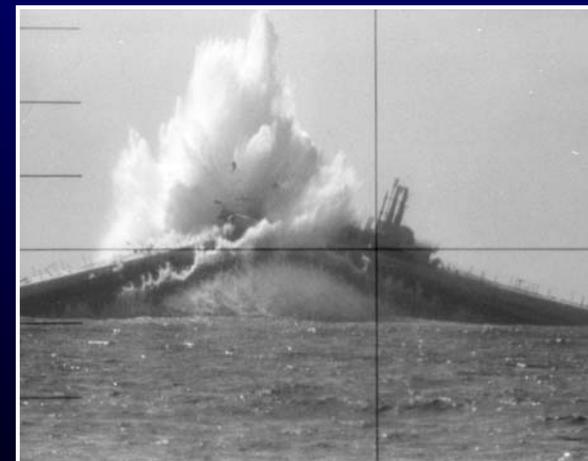


MK 48 Torpedo Intermediate Maintenance Facility, Pearl Harbor

Providing Relevance to the Fleet

Anti-Submarine Warfare

- ***Aircraft Carrier
Tactical Support Center***
- ***Submarine Sonar Systems***
- ***Undersea Warfare Decision Support
System***



Looking into the Future

- Unmanned Undersea Vehicles (UUV)
 - Provide in-water testing and evaluation
 - Partner with other Warfare Centers, Submarine Development Squadron Five
 - Supply UUV Homeport facility, support
- Cyber Security and Engineering
 - Certification & Accreditation
 - Testing & Analysis
 - Subject Matter Experts



Employment by Location

2,518 <i>Total All Sites</i>	2,039 <i>Federal Civilians</i>	314 <i>Support Contractors</i>	30 <i>Military</i>	95 <i>NAVSUP Fleet Logistics</i>	40 <i>Naval Interns</i>

Pennsylvania 192 	Hawaii 134
California 86 	Virginia 61
New Hampshire 34 	Maryland 43
Florida 26 	Nevada 12
6 Other US States 21	
Guam 7 	British Columbia, Canada 5
Germany 1	Japan 1

Washington State

1,830 Total

- **Federal Civilians:** 1412
- **Contractors:** 255
- **Military:** 28
- **Naval Interns:** 40
- **NAVSUP Fleet Logistics:** 95

Division Details

Division Resources

Workforce (FY15)

- 30 Military
- 2039 Government Civilians
- 314 Contractors

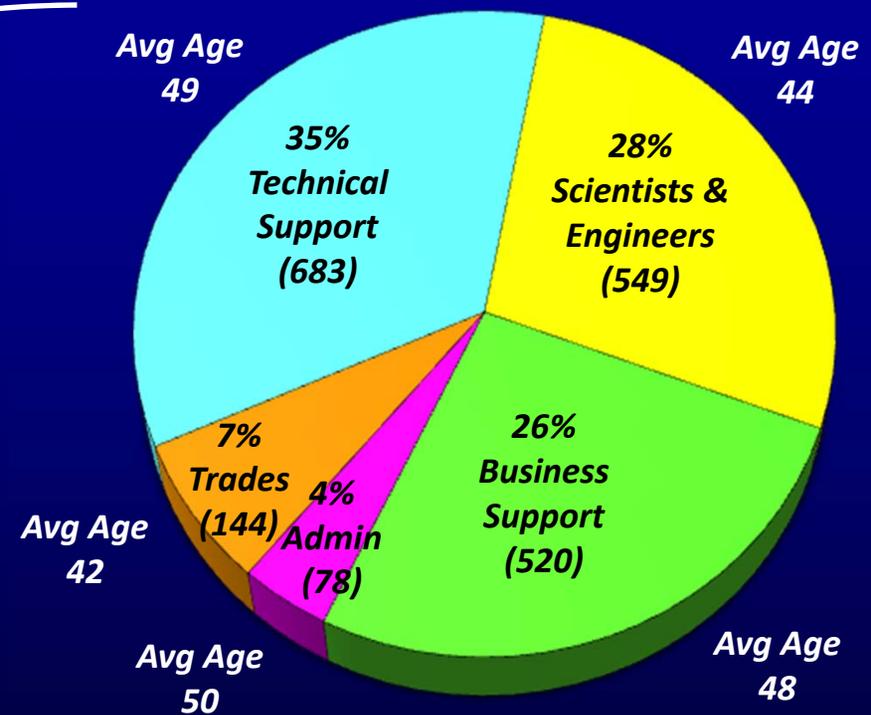
Funding (FY15)

- \$484M New Funds
- \$210M Carry-In

Facilities

- 1,368 Acres
- 330 Bldgs
- 2,486 Bldg KSF
- 3,000+ NM2 Sea Ranges

Civilian Workforce



58% Veterans (1,153)

65% College Educated

Veteran Preferences	
5 Pts	486
10 Pts	81
Wounded Warriors	227

2+ Yrs / Associate	218
Bachelors	752
Masters	308
PHDs	10

Higher Education Partnerships

- Olympic College
 - Engineering programs, mentoring
- Recruiting/Intern Programs



Washington State
University



Prairie View
A&M University



Montana State University

- Technical Collaboration
 - Applied Research Lab - Penn State
 - Applied Physics Lab – University of Washington

Community Partner



POW/MIA Remembrance Ceremony

NUWC Division, Keyport's Black Employment Program (BEP) presents:

Dr. Martin Luther King, Jr. Commemoration

January 13, 2016
11:00-12:00

Naval Undersea Museum Auditorium
Keyport, WA

Live Performance by *Living Voices*



Remotely Operated Vehicles Programs, K-12



Food Drive



Health, Heritage and Hobby Day



Pearl Harbor Remembrance Ceremony

100 Years of Kitsap & Navy History

From Torpedoes and Quarters B



To Gettysburg Oak, Grandchildren and UUVs

What's Next

Department Briefs

Technology Roadmaps (Where Our Future Leads)

Contracting (The Products and Services We Buy)

KPT Core Mission Area – Undersea Test, Performance Assessment and Assurance

Today's Navy

- Scripted Tests
- Short Duration Events
- Acoustic Sensors
- Post-Event Analysis
- Localized Simulation
- Limited Threat Emulation

Potential Game Changers/ Disruptive Technologies

- Networked Adaptive Autonomous Vehicles
- Autonomous Undersea Vehicles (AUVs)
- Carried on Ship or Towing
- Wide Area Acoustic Search
- Large Area Acoustic Detection
- 3D Systems
- AI/ML (70% more precise)
- Autonomous Undersea Vehicles
- Deep Ocean Operations
- Improved Mission Planning
- Low Frequency Acoustic Search
- High Performance Cloud Computing
- Big Data Analytics
- Machine Learning and Analytics

Next Navy (+5-10 yrs)

Current Focus

Developing systems that can be used in a variety of environments and are able to adapt to changing requirements. This includes the ability to integrate with other systems and to be able to operate in a variety of environments.

Navy After Next (+20 yrs)

Vision of the Future

Developing systems that can be used in a variety of environments and are able to adapt to changing requirements. This includes the ability to integrate with other systems and to be able to operate in a variety of environments.

KPT Core Mission Area – Maintenance, Repair, and Technology Insertion

Today's Navy

- Centralized weapons maintenance
- Static maintenance technology
- Rapidly changing system technology
- "back shop" maintenance-removal/replace/refresh
- Clearly defined and segregated maintenance and production pipelines

Potential Game Changers/ Disruptive Technologies

- 3D printing
- Autonomous maintenance
- AI/ML
- Autonomous repair
- Autonomous maintenance
- Autonomous repair
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- Autonomous maintenance
- Autonomous repair

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Navy After Next (+20 yrs)

Vision of the Future

Developing systems that can be used in a variety of environments and are able to adapt to changing requirements. This includes the ability to integrate with other systems and to be able to operate in a variety of environments.

KPT Core Mission Area – In-Service Engineering

Today's Navy

- Forward presence
- Limited autonomy
- Superior technology
- Battlepace awareness
- Intelligence and defense
- Information dominance
- Weapon performance
- Budget constrained
- Need for in-service system sustainment

Potential Game Changers/ Disruptive Technologies

- Autonomous maintenance
- Autonomous repair

Next Navy (+5-10 yrs)

Current Focus

Developing systems that can be used in a variety of environments and are able to adapt to changing requirements. This includes the ability to integrate with other systems and to be able to operate in a variety of environments.

Navy After Next (+20 yrs)

Vision of the Future

Developing systems that can be used in a variety of environments and are able to adapt to changing requirements. This includes the ability to integrate with other systems and to be able to operate in a variety of environments.

BAE SYSTEMS

... and many, many more companies



Corporate Operations Department

Deborah Hisayasu



Corporate Operations Department

Workforce

Planning

- Health Assessment
- Strategic Planning
- Investment Planning
- EEO Programs

Management

- Staffing
- Employee Relations
- Labor Relations
- Performance Mgmt
- EEO Complaints



Shaping

- Recruiting & Interns
- Mentoring
- Retention
- Awards
- Hiring Plans

Development

- Training & Development
- Apprentice Program
- Academic Programs
- DAWIA Programs

Infrastructure

Facilities Management



- Mission Support
- Building Maintenance
- MILCON/Facility Planning
- Energy Conservation

Environmental

- Compliance
- State Permits
- Waste Disposal
- Industrial Processes



Safety

- Occupational Safety & Health
- Explosives



Transportation



- GSA Vehicles
- Mobile Cranes
- Mat'l Handling Equip.

Information Technology

Networks & Telecommunications

- Network Communications
- Technology and Server Infrastructure
- Operational support



Corporate Applications & NMCI

- Corporate Applications & SharePoint Sites
- SIPRNET
- NMCI Administration
- DON Application and Database Management System (DADMS)



Information Assurance (IA)

- Information Integrity & Availability
- Firewalls
- IA training



Security

- Information
- Industrial
- Personnel
- Physical
- Emergency Management



Public Affairs

- Internal & External Communication
- Technical Library
- Visual Information
- Congressional Outreach
- Community Relations
- Tours



Corporate Business

- Corporate Planning
- Quality Management System
- Management Internal Controls
- Records Management
- ERP Extended Business Office
- Continuous Process Improvement (CPI)
- Metrics, Analysis, and Data



Seaport Service Contracts

- **N00178-14-D-7662FY01 Info. Technology**
 - Base-wide information technology support (network/help desk/server/automation)
 - Awarded 17 June 2016
 - Expires 16 June 2020
 - CJ Seto Support Services
 - Base Year Plus 4 option years, CPIF
- **N00178-14-D-7907FY01 Admin/FM/PM**
 - Base-wide admin and financial/program management support
 - Awarded 01 May 2015
 - Expires 30 Apr 2020
 - Saalex Corporation
 - Base Year Plus 4 option years, CPIF
- **N00178-04-D-4083FY05 Graphics**
 - Base-wide graphics and design support
 - Awarded 01 Sep 2014
 - Expires 31 Aug 2017
 - McLaughlin Research
 - Base Year Plus 2 Option Years, CPFF
- **N00178-04-D-4065FY03 Infrastructure**
 - Base-wide infrastructure support (safety/environmental/hazardous waste Treatment, Storage and Disposal Facility (TSDF)/facilities/transportation/security)
 - Awarded 01 Nov 2013
 - Expires 31 Oct 2016
 - ICI Services Corporation
 - Base Year Plus 2 option years, CPFF

Supply Purchases

- **Infrastructure Support Purchases**
 - Furniture (modular desks, partitions, chairs, tables, etc.)
 - Small electrical and HVAC materials

- **Information Technology Purchases**
 - Software & software support
 - Network hardware (routers, servers, switches, etc.)
 - Network cables & tools
 - Telecom equipment & supplies



Systems Acceptance & Operational Readiness Department

Garreth Zook



NUWC Keyport Core Mission Area – Undersea Test, Performance Assessment and Assurance

Today's Navy

- *Scripted tests*
- *Short duration events*
- *Acoustic sensors*
- *Post-event analysis*
- *Localized stimulation*
- *Limited threat emulation*



Potential Game Changers/ Disruptive Technologies

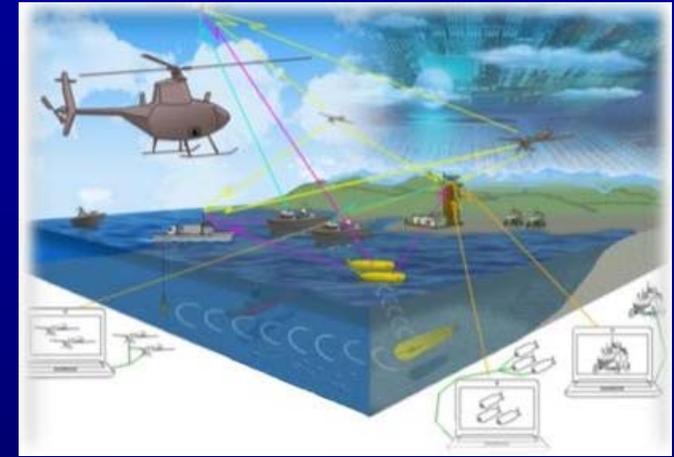
- Networked adaptive autonomous vehicles
- Supercavitating and stealth vehicle T&E
- Clandestine system testing
- Wideband acoustic system use
- Large area and long duration missions

T&E Systems

- ISR stimulation (threat representative)
- Persistent sensor networks
- Stealth communications
- Improved mission planning
- Live virtual constructive events
- High-performance cloud computing
- Big data analytics
- Machine learning and autonomy



Ref. ONR S&T Strategy 2015



Next Navy (+5-10 yrs)

Current Focus

Anytime/Anywhere T&E. Leverage existing in-water and land-based T&E capabilities, enhance capabilities by repurposing current systems while introducing more agile stimulation and monitoring systems to expedite transformation of T&E from scripted and defined objectives to a measurement of system performance and mission relevance.

- *Incorporation of network and cyber testing capabilities to enable live, virtual and constructive events*
- *Integrating underwater communications technology to enable frequency agile monitoring and measurement capabilities*
- *Improved planning and assessment capability for near real-time feedback to fleet and developers*
- *Improved emulator systems (agile threat representative)*
- *Long-term test scenarios including periodic communication, evaluation, and re-tasking*

Navy After Next (+20 yrs)

Vision of the Future

Self-deploying autonomous networked underwater equipment, remotely controllable, forward deployed, with near real-time analysis feedback and archival capability for in-depth post-analysis to provide assessment of system performance

- *Undersea network of distributed autonomous self-deploying and intelligent sensors*
- *Advanced integrated planning and assessment capability*
- *Advanced incorporation of simulation/stimulation capabilities for live, virtual and constructive testing*
- *Agile stimulation systems for threat representation*
- *Capability to provide assessment and confidence in complicated future systems*
- *Non-acoustic instrumentation & communication at depth/speed*

Seaport Service Contracts

- **N00178-08-D-5371/FY01 Engineering & Technical Support Services**
 - Range operations & systems, configuration management (CM) & drafting, environmental testing, Undersea Tracking Range Equipment (UTRE), MK30 Undersea Targets Depot, and aircraft component depot (actuator motors)
 - Awarded: 10 Aug 2011 / Concludes: 30 Oct 2016
 - Celeris Systems, Inc.
 - Base Year Plus 4 option years, CPFF
- **N00178-14-D-7656/FY01 Hawaii & San Diego Support Services**
 - Ford island, Pearl Harbor waterfront, MK30/Kauai, IMA and WESTPAC MK30 Detachment (Guam & Japan)
 - Awarded: 15 Aug 2015 / Concludes: 14 Aug 2018
 - Celeris Systems, Inc.
 - Base Year Plus 2 option years, CPFF
- **N00178-14D-7656/FY02 Acoustic Trials & Range Sustainment**
 - Surface Ship Radiated Noise Measurement (SSRNM), Fleet Sonar Self Noise (FSSN), Prairie-Masker Operability (PMO), range systems development, range data reduction & subject mater expert support
 - Awarded: 11 Sep 2015 / Concludes: 10 Sep 2020
 - Celeris Systems, Inc.
 - Base Year Plus 4 option years, CPIF
- **N00024-16-R-3128 Technical & Industrial Support Services**
 - Range operations & systems, CM & drafting, environmental testing, UTRE, MK30 Depot and aircraft component depot (actuator motors) (all technical/no engineering)
 - Scheduled Award: 30 Sep 2016 / Scheduled Conclusion: 29 Sep 2021
 - RFP Closes: 03 May 2016
 - Base Year Plus 4 option years, CPIF

Supply Purchases - Recurring

- **Infrastructure Support**
 - Furniture (modular desks, partitions, chairs, tables, etc.)
 - Small electrical and HVAC materials

- **Information Technology**
 - Software & software support
 - Network hardware (routers, servers, switches, etc.)
 - Network cables & tools
 - Telecom equipment & supplies

- **Vessel Support**
 - Safety equipment / inspections (rafts, buoys, fire prevention, beacons, etc.)
 - Crane and winches maintenance and repair

- **Shop Support**
 - Tools (wrenches, dead blow hammers, hammer, watt meters, socket sets, etc.)
 - Hardware (screws, bolts, set-screws, etc.)
 - Consumables: nitro gloves, brass and steel brushes, strapping and packing tape, rope, wire)
 - Magnification lights
 - Drill press

Supply Purchases – Current & Future Need

- **Current Need**

- Welding and painting
- Marine electrical (generators, navigation systems) and marine electronic repairs
- Diesel engine and generator repair
- Wire rope – purchase & maintenance
- Marine fire fighting certification
- Publications: navigation, safety, coast guard requirements, log books
- Consumables: filters: water, air, oil, hydraulic
- Machining services – parts
- Helical gears
- Specialty kits (actuator, engine repair, etc.)

- **Future Need**

- Electronic test equipment
- Bulk oil



Maintenance, Engineering & Industrial Operations Department

Tom Lacey



NUWC Keyport Core Mission Area – Maintenance, Repair, and Technology Insertion

Today's Navy

- *Centralized weapons maintenance*
- *Static maintenance technology*
- *Rapidly changing system technology*
- *'Back shop' maintenance - remove/replace/refurbish*
- *Clearly defined and segregated maintenance and production pipelines*

Potential Game Changers/ Disruptive Technologies

- UUV and weapon technology convergence/modularity
- Alternative vehicle propulsion and energy sources
- Additive manufacturing technology maturation
- Automation and robotics
- Pace and rate of technology obsolescence
- Universal automated testers

USW Vehicle and Weapon Maintenance

At-Risk Material Support

Maintenance Technology Insertion



Next Navy (+5-10 yrs)

Current Focus

Develop maintenance technology, facilities, and processes that are based on flexible and adaptive capabilities to support multiple platforms and systems. Evaluate, assess and apply the right disruptive technology to reduce forward maintenance burden.

- *Agile maintenance facilities aligned around diverse UUV technologies and missions*
- *Coating and material technologies that reduce corrosion and minimize repair and replacement requirements (additive manufacturing and advancement in coatings)*
- *In-situ repair Tooling and processes to reduce cycle time, transportation, and work*
- *Development of maintenance processes and equipment that support dispersed and forward maintenance*

Navy After Next (+20 yrs)

Vision of the Future

Advanced maintenance systems and capabilities enabling forward-based or on-platform maintenance of systems, vehicles, or weapons.

- *Forward-based vehicle and weapon maintenance and repair using mixed technologies providing real-time in-situ solutions*
- *Geographically dispersed, on-demand parts production Centrally linked to virtual parts databases*
- *Life of system coatings eliminating condition-based maintenance*
- *Intelligent automated testers capable of self-learning, diagnosis and repair*

Services

- **N00178-04-D-4033-FY02 Industrial Services/Trades**
 - Delphinus contract (large business)
 - IDIQ / CPFF
 - Re-compete planned for FY 2018 with increased scope
- **Engineering Support Services**
 - Award planned for May 2016
 - Small business / CPIF
- **Other Services**
 - Calibration of tooling
 - Test sets repair
 - Small appliance repair
 - Machine maintenance
 - Analysis and repair
 - GFM provided for upgrade to new baseline
 - Weapons grade machining/fabrication
 - Electroplating and anodizing
 - Scope repair

Material

- **Circuit Card Assemblies**
 - Printed wiring boards
- **Aluminum Alloy Fabrication**
 - Shells; pump heads; plates
- **Mechanical Assemblies**
 - Valves; accessories bulkhead
 - Fore and aft fuel tank
- **Electrical Assemblies**
 - Power supplies
- **Electro-mechanical Assemblies**
 - Parts washers; automated test equipment
 - Chiller
- **Cable Assemblies**
- **Computers**
- **Unique Consumables**
 - O-rings; electromagnetic interference gaskets; valve seats
 - Wiper rings; seals



In-Service Engineering Department

Mark Schuler



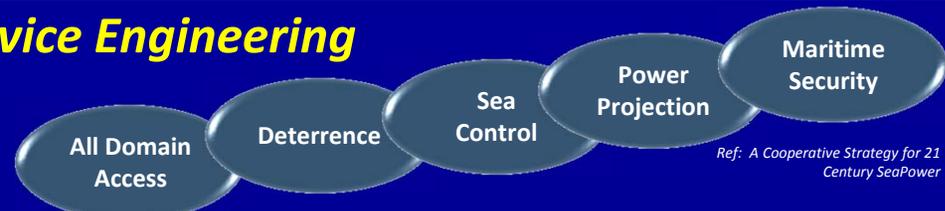
NUWC Keyport Core Mission Area – *In-Service Engineering*

Today's Navy

- *Forward presence*
- *Limited autonomy*
- *Superior technology*
- *Battlespace awareness*
- *Integrated defense*
- *Information dominance*
- *Warfighter performance*
- *Budget constrained*
- *Need for in-service system sustainment*

Potential Game Changers/ Disruptive Technologies

- Advanced cyber capabilities
- Data and target fusion
- Software assurance
- Data visualization technologies
- Augmented/virtual/mixed reality technologies



Ref: A Cooperative Strategy for 21 Century SeaPower

Next Navy (+5-10 yrs)

Current Focus

Develop systems that ensure safety & effectiveness, optimize system reliability & operational availability, reduce program life-cycle costs, increase fleet self-sufficiency, and lower fleet maintenance burden

- *Developing software assurance capabilities to reduce design flaws, improve security, and enhance reliability*
- *Researching augmented & virtual reality technologies for use in fleet maintenance and training applications*
- *Developing product line software architectures for aircraft carrier and other Fleet Anti-Submarine Warfare systems*
- *Supporting cybersecurity designs of submarine tactical system and network architectures*
- *Developing predictive obsolescence management techniques to provide improved forecasting data*

Navy After Next (+20 yrs)

Vision of the Future

Advanced systems capable of sustained in-service operation through improved design, high assurance hardware & software architectures, mixed-reality remote maintenance, and obsolescence management

- *Self-healing systems and networks, capable of continuous operation despite component failure*
- *Fleet maintenance, repair, and training using mixed-reality technologies providing real-time guidance*
- *Open architecture software development across multiple major Navy combat systems*
- *High assurance systems, designed to resist and repel external cyber attacks*
- *Fully integrated obsolescence management to ensure systems will meet or exceed service life requirements*

Seaport Contracts

- **N00178-04-D-4018-FY08 In-Service Engineering (ISE)/Integrated Logistics Support (ILS) Support Services**
 - Logistics and engineering support across the department
 - Awarded 29 Mar 2013
 - Expires 31 Mar 2017
 - BAE Systems (large business)
- **N00178-04-D-4018-FY07 Software Support Services**
 - Tactical software development and maintenance
 - Awarded 26 Sep 2012
 - Expires 30 Sep 2016
 - BAE Systems (large business)
- **N00178-08-D-5546-FY01 Software Support Services**
 - Non-tactical software development and maintenance
 - Awarded 30 Sep 2011
 - Expires 30 Sep 2016
 - Phacil (small business)
- **N0024-15-R-3097-FY01 Solicitation for Software Support Services**
 - Combines software support for the above two task orders
 - Currently in evaluation process

Technology Insertion Hardware (TIH)

- **N00253-11-D-003 TIH**
 - Awarded 20 Jun 2011
 - Expires 19 Jun 2016
 - Lockheed Martin
(large business)
- **N00253-14-D-004 TIH**
 - Awarded 29 Sep 2014
 - Expires 28 Sep 2019
 - DRS Technologies
(large business)

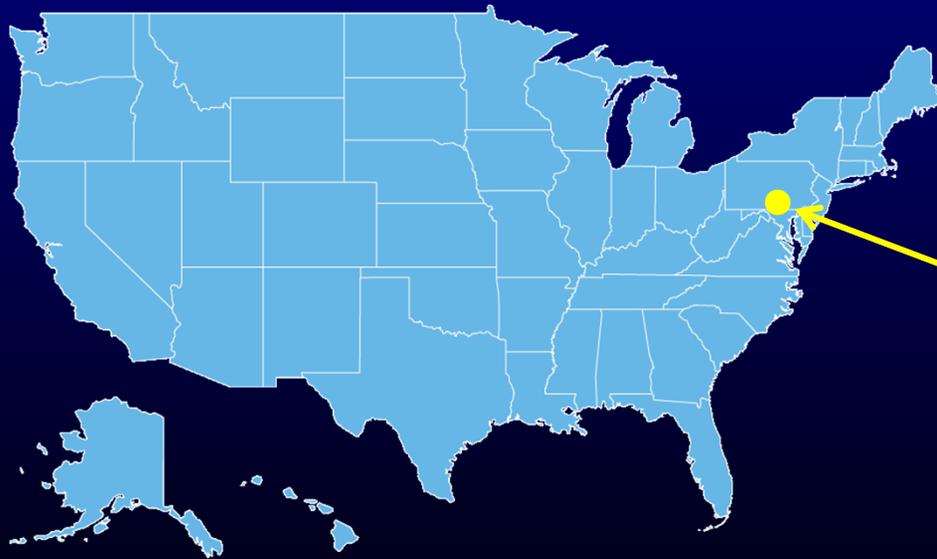
Other Contracts

- Materials and services in support of Lightweight Torpedo In-Service Engineering
- Document scanning
- Misc. software consulting for Oracle database
- SONAR sensors
- Acoustic countermeasures
- Network switches, blade servers, equipment racks



Naval Sea Logistics Center (NSLC)

Robert Schneider



Mechanicsburg, PA





Naval Sea Logistics Center

DoDAAC: 65726

Life-Cycle Logistics

- **Integrated Product Support (IPS)**
 - Product Support Element Management
 - Supportability Analysis
 - Product Modeling & Metrics (PMM)
 - Readiness Based Sparing
- **Outfitting and Analysis**
 - Analysis & Metrics
 - Integrated Logistics Support (ILS) Certifications
 - Outfitting Support
- **Configuration & Technical Data Management**
 - Technical Manual Health Assessments (TMHA)
 - Configuration Data Management (CDM/CDMD-OA)
 - Item Unique Identification (IUID)

Maintenance & Technical

- **Planned Maintenance System/ Future of PMS (FoPMS)**
 - Maintenance Procedures
 - LOEP Management
 - Force Revisions
 - Reliability Center Maintenance (RCM)
- **Engineering & Technical**
 - Navy Special Emphasis Program
 - Level 1 / SUBSAFE
 - Engineering Referrals
 - DLA 339 / Engineering Referrals
- **Supplier Performance**
 - Product Data Reporting and Evaluation Program (PDREP)
 - Contractor Performance Assessment Reporting System (CPARS)
 - Past Performance Program (PPIRS)

Material Management

- **Operating Materials & Supplies (OM&S)**
 - Financial Improvement Audit Readiness (FIAR) for Material
 - NAVSEA Inspector General Compliance
 - Data Integrity and Conversion
 - Inventory & Validation
 - Unique Material Master (UMM)
- **Warehouse Operations**
 - Central Receiving
 - Inventory Management
 - Receipt and Stowage
 - Material Issue
 - General Storage and Warehousing
 - Preservation and Packing
 - Shipping and Transportation
 - Traffic Management Support

Information Technology

- **Operations & Information Management**
 - Operational support
 - NMCI administration
 - DON Application and Database Management System (DADMS)
- **Information Assurance (IA)**
 - Compliance
- **Software Life-Cycle Support**
 - Production Operations
 - Application Management
 - IT Project Management
 - Software Design
 - Software Development
 - Software Testing
 - Software Release Management

Corporate Operations

- Corporate Planning
- Quality Management System
- Management Internal Controls
- Records Management
- Continuous Process Improvement (CPI)
- Site Management
- Infrastructure Support
- Facilities Management
- Security (Physical & Personnel)

Seaport Contracts

- **N00178-14-D-7662-FY01 – Operating Material & Supplies (OM&S) Support at NSWC Crane, IN**
 - Technical, data management, material management, and admin support
 - Awarded 23 Sep 2014
 - Expires 22 Sep 2019
 - Scheduled to transfer from Fleet Logistics Center Norfolk to NSLC in May 2016
 - CJSeto Support Services, LLC (small business)
- ***In process actions***
 - *Logistics and engineering services support for various stages of the acquisition and sustainment processes*
 - *Software development, information assurance, operations support, as well as systems and database administration for web applications*
 - *NSLC IT managed systems*
 - *NAVSEA 06 IT managed systems*
 - *OM&S support; specifically the inventory and warehouse management functions at various NAVSEA Warfare Centers*
 - *Except NSWC Crane and NUWC Keyport which may be addressed later*

Other Service Contracts

Operating Materials & Supply OM&S Support

- **N65726-15-F-0011 – Various NSWC Sites**
 - OM&S program support
 - Awarded 26 May 2015
 - Expires 25 May 2017
 - ASR International Corp (small business)
- **N00189-13-D-0036 – NSWC Crane, IN**
 - Provides supply chain management support
 - Awarded 09 Sep 2013
 - Expires 08 Sep 2016
 - Scheduled to transfer from Fleet Logistics Center Norfolk to NSLC – May 2016
 - Management Consulting, Inc. (large business)
- **SP3300-14-C-5003 – NSWC Dahlgren, VA**
 - Provides for supply support operations
 - Awarded 01 Apr 2013
 - Expires 31 Mar 2017
 - Goldbelt Falcon, LLC (small business)

Simplified Acquisitions

- **Information Technology Purchases**
 - Software licenses (perpetual) & software support
 - Software licenses (term)
- **Other Purchases**
 - Office equipment and supplies
 - Facilities support and furniture
 - Equipment maintenance
 - Training
- **Total SAP actions ~\$3M - 5M per year**



Acquisition Overview

Carrie Bender



Distribution Statement A: Approved for Public Release; Distribution is unlimited.

Department of Navy FY17 Budget Request

Key Points:

- Overall 2.5% less than 2016
- Increased O&M
- Increased RDT&E
- Ohio Class Replacement
- Anti-Ship missile programs
- Navy aviation



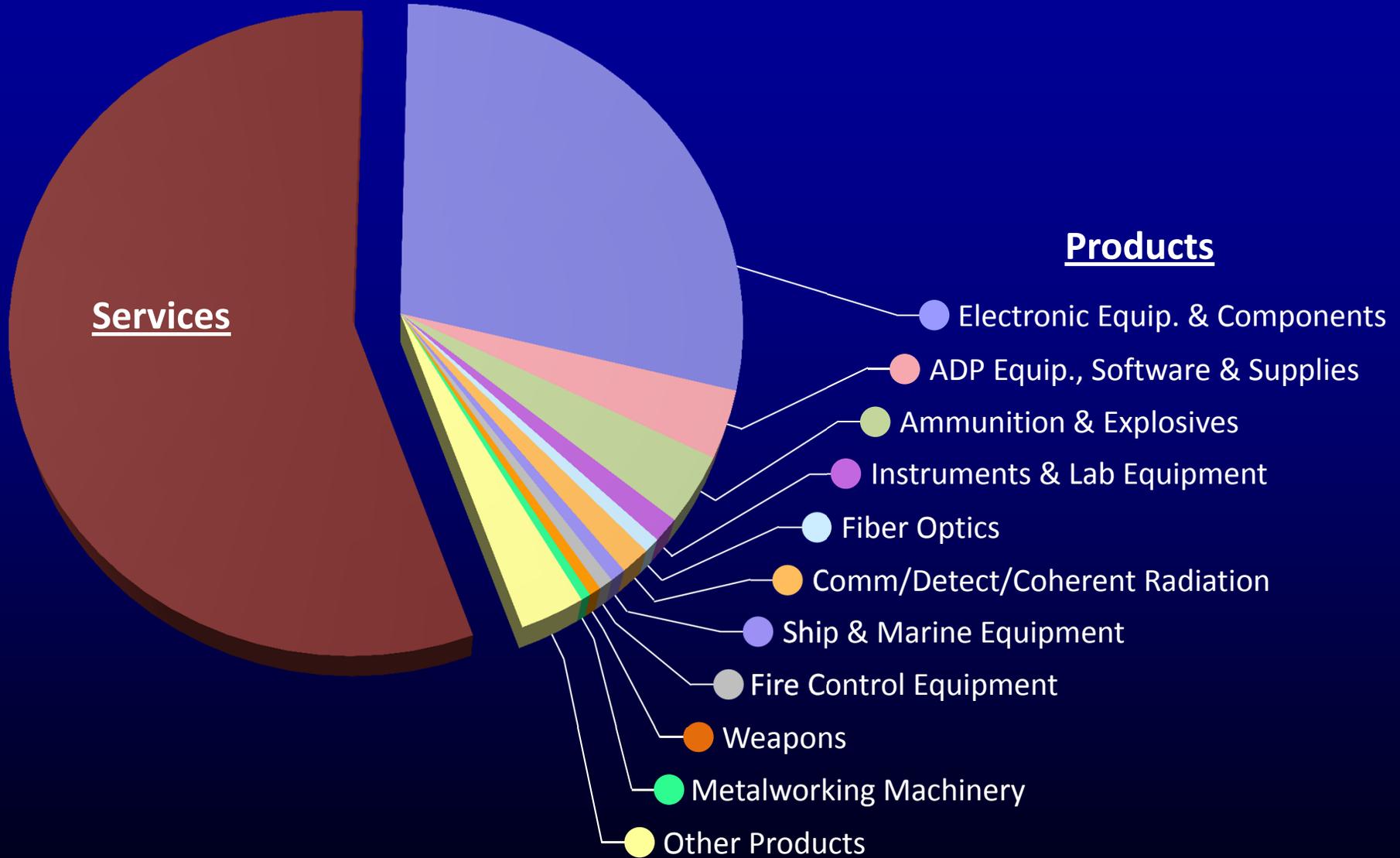
NUWC Keyport - What We Buy

Services

- Technology development
- Data collection, entry & admin support
- Technical writing & graphics
- Software development & maintenance
- Systems development
- Systems maintenance & installations
- Industrial trades
- Range craft operations and maintenance
- Hazardous waste mgmt
- Hazardous waste disposal
- Personnel development & training
- Facilities maintenance
- Transportation
- Communications

Services Portfolio	Services Sub-Portfolio	% KPT/NSLC Services Contracts	
Knowledge Based	Engineering	52%	57%
	Administrative & Other	5%	
Equipment	Maintenance, Repair and Overhaul	6%	9%
	Installation of Equipment	3%	
Facility	Building & Plant Maintenance	1%	4%
	Utilities	1%	
	Operation of Gov't Facilities	1%	
	Housekeeping	1%	
Electronics, Communications	IT & Telecommunication	25%	25%
R&D	R&D - Defense Other	5%	5%

NUWC Keyport FY16 Forecast



Systems and Structure Changes

FIAR – Financial Improvement and Audit Readiness

In fiscal year (FY) 2011, 21 of the 24 major federal agencies had unqualified (clean) audits. Achieved auditability on their annual financial statements. The Department of Defense (DoD) failed its audit.

In 2016, the (DoD) is the only remaining agency with a disclaimer from its auditors. The FY2010 National Defense Authorization Act requires auditability by 2017. The Department of Defense’s audit readiness efforts directly support the DoD’s ability to . . . prove to both the Congress and the American people that the DoD is a good steward of public funds.



Systems and Structure Changes

How will FIAR affect DoD and our business partners? (End-to-End (E2E), Procure-to-Pay (P2P), and Transparency of Procurement Spend)

Waves 1&2 – Statement of Budgetary Resources

- Usage of Product Service Code and Object Class code to improve traceability of budget to expenditure data – contractor interest is emphasis on proper NAICS
- Usage of Seaport e-Milestones to improve visibility of progress toward funds obligation/award
- Status of obligated balances and disbursements – more de-obligation mods
- Able to support account transactions and balances with audit evidence – increased scrutiny of delivery, receipt, and invoicing documents submitted by companies

Waves 3&4 – Accountable Property/Material Trackability

- Reduced procurement of materials under services contracts
- Increased emphasis on compliance with Government Furnished Property clauses

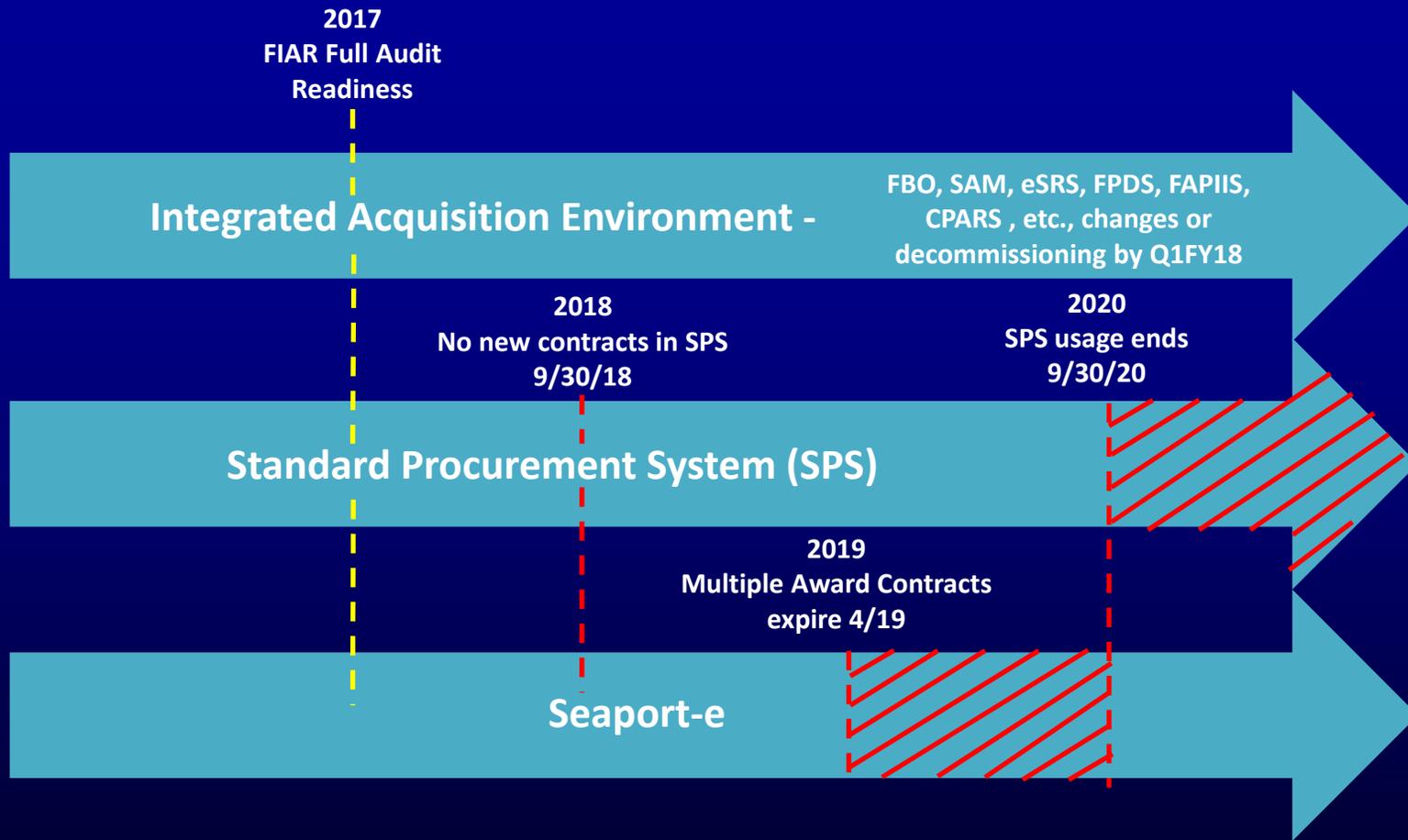
Systems and Structure Changes

How will FIAR affect DoD and our business partners? (End-to-End (E2E), Procure-to-Pay (P2P), and Transparency of Procurement Spend)

What we've experienced so far:

- Absolute usage of automated systems for contract actions – very limited usage of verbal authorizations
- More time to issue contracting actions – as systems become more populated with data and documents to meet E2E funding transparency, they become slower
- Some PSC/OCC cross referencing errors
- Creativity to get industry standard units to convert to Enterprise Resource Planning (ERP) units
- Decreased usage of variation in quantity clauses
- Increased invoice rejections due to exacting matching requirements between contract item descriptions and quantities; receipt/shipping documentation; and, invoice information in Wide Area Workflow (WAWF-iRAPT)

Systems and Structure Changes



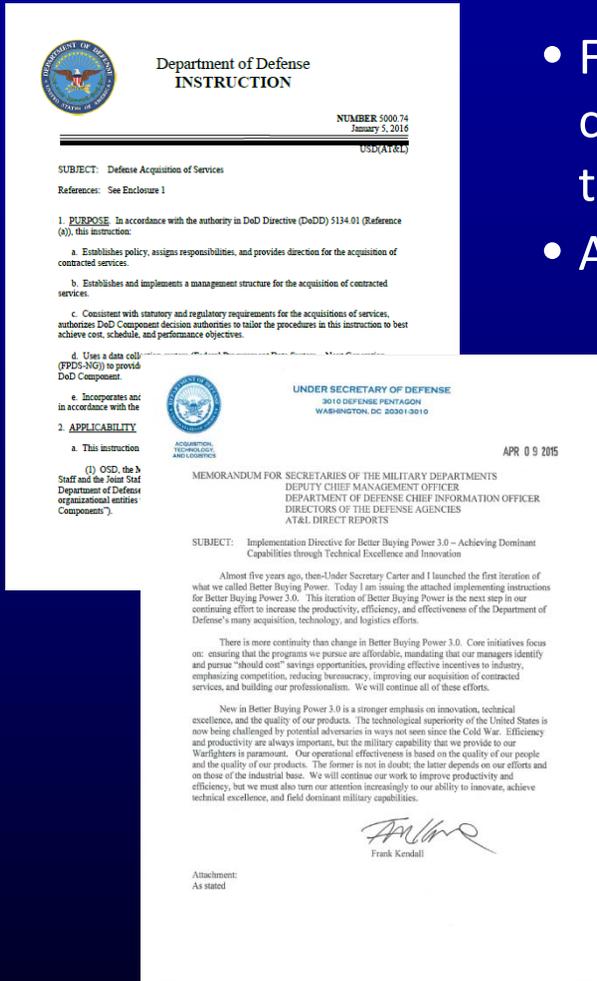
Source: DoD Strategic Plan for Defense-wide Procurement Capabilities 8/2014

COST PLUS INCENTIVE FEE CONTRACTS (CPIFs) – what we've seen so far:

- **Contractor proposal teams may not fully grasp the effects of CPIF**
- **Aggressively competitive cost proposals are often subject to significant upward adjustments during cost realism analysis. Award decision is based upon trade off of technical evaluation and TOTAL EVALUATED COST (not proposed cost)**
- **While contract award decision is based upon the cost realism analysis, the contract award document reflects the proposed cost**
- **Incentive fee earned affected by how much the contract holder exceeds the composite labor rate in the contract. The greater the difference between proposed labor rate and actual labor rate during contract execution, the less fee earned**
- **Performance problems when contractor tries to cut costs after award to get closer to the proposed average labor rate**

Services Acquisition Environment

DoD Instruction 5000.74 – Defense Acquisition of Services



- Functional Domain Experts (FDEs) for each service category – use “should cost” and establish cost reduction targets
- Annual Inventory of Contracts for Services (ICS)
 - Reduce redundancy; use common processes; utilize metrics to document trends
 - Mandated Services Requirements Review Boards
 - Well defined service levels/mission requirements
 - Services management metrics and tripwires

BETTER BUYING POWER 3.0

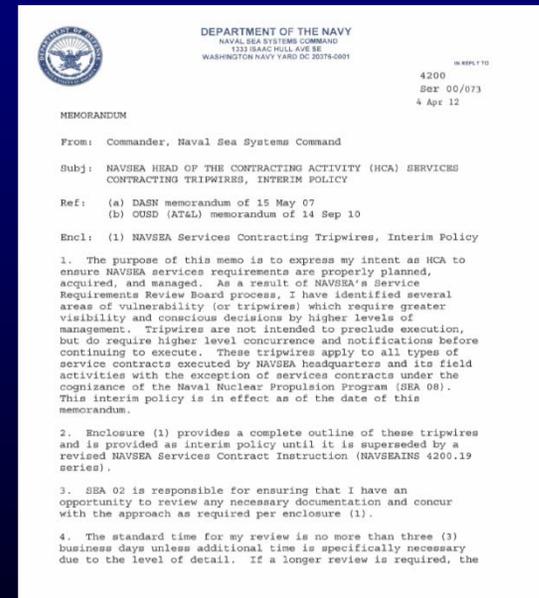
- Strengthen cybersecurity throughout lifecycle
- Increase prototyping and experimentation
- Increase small business participation
- Increase use of incentive type contracts (CPIF)

Tightened Contract Oversight: NAVSEA Tripwires

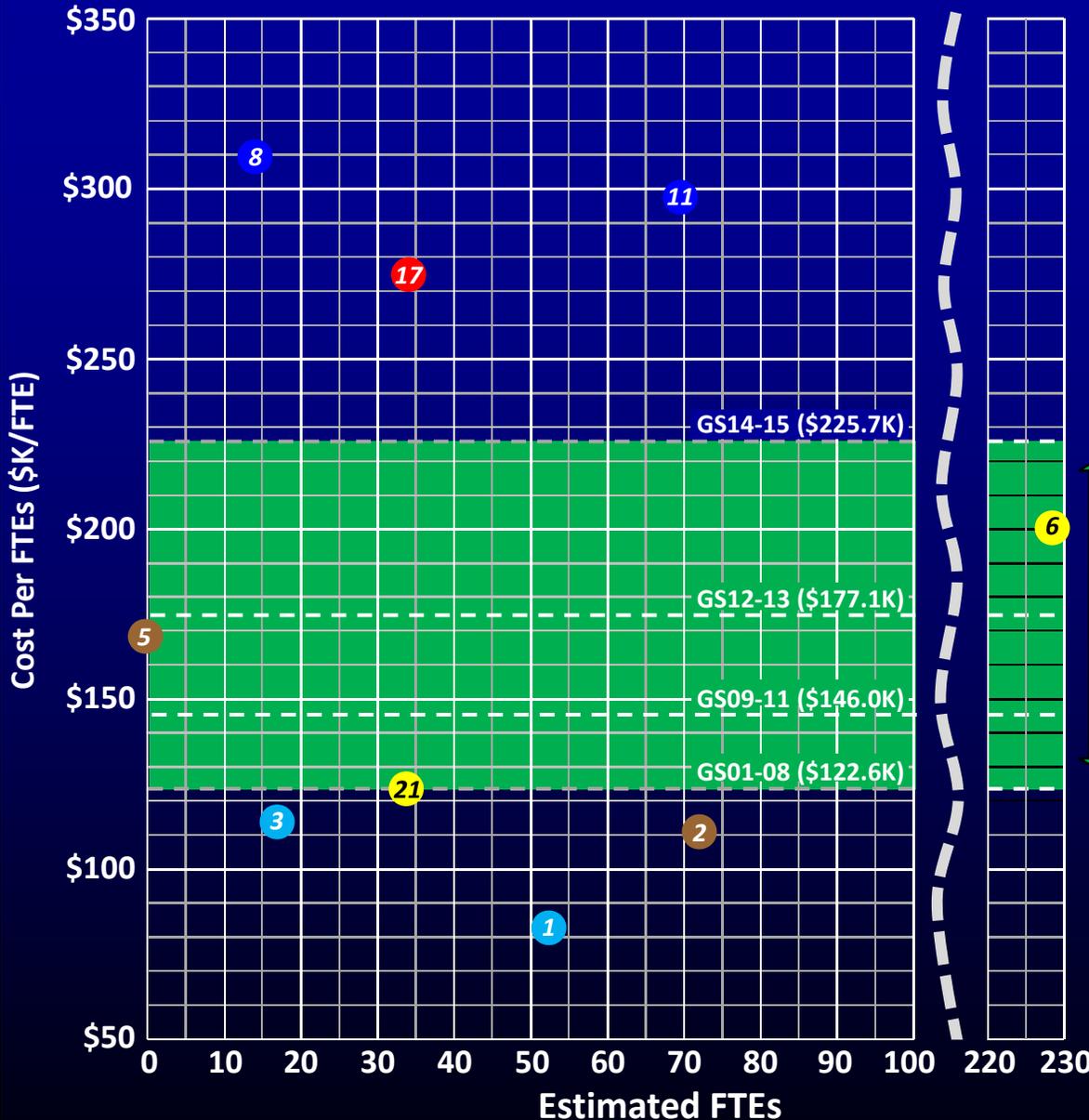
Selected tripwires:

- Hourly labor rates exceeding rate of \$156
- Excessive variation between proposed and actual rates
- Subcontracts - monitor proposed addition of subcontractors beyond what was included as part of the initial award
- Excessive ODCs on a services contract
- Lack of effective competition (when only one offer is received, it's going to get a closer look and require headquarters approval)

**Commander, Naval Sea Systems
Command Memo of 4 April 2012,
with subsequent revisions**



Example Metric - Average FTE Labor Rate



Metrics information briefed to NAVSEASYS COM as part of DoD 5000.74 Services Requirements Review Board process

FY16 Effective Gov't Rates

Data points are fictional, and for illustration purposes only

Supply Chain Security and Counterfeit Materials Concerns:

To support Protection of Mission Critical Functions, and to Achieve Trusted Systems and Networks (TSN), we:

- **Include DFARS clause “Supply Chain Risk” in our IT contracts**
- **Use mandatory DoN Enterprise Software Licensing (ESL) agreements**
- **Use recommended DoD Enterprise Software agreements with proven vendors**
- **Require proof of certification level with quote when competing among authorized dealers of OEM equipment and support services**
- **Include DFARS clause “Contractor Counterfeit Electronic Part Detection and Avoidance System” when applicable**
- **Refer suspected unauthorized parts and counterfeit materials to NCIS**

Other Trends in Acquisition/Procurement

Increased emphasis on small business awards and participation – FY 16 National Defense Authorization Act:

- **Section 821 – small business must be part of the acquisition strategy**
- **Section 857 – goods and services provided by companies new to defense contracting treated as commercial items**
- **Section 867 – small business teams and joint ventures allowed to rely upon the past performance and qualifications of the team members and joint venturers when pursuing large contracts**
- **Section 859 – Office of Hearings and Appeals in the SBA, created to be a statutorily independent office to hear size standard challenges**
- **Section 872 – DoD required to report failures of contractors to meet goals under comprehensive small business subcontracting plans**
- **Section 873 – pilot program to streamline contract awards to small, nontraditional government contractors**

Small Business Technology Transfer (STTR) contracting –

- Another tool for funding federal research and development
- Unique feature is the requirement for a small business to collaborate with a non-profit research institution in Phases I and II
- Increases private sector commercialization of innovations derived from federal R&D
- In addition to Phase III Small Business Innovation Research contracting authority supporting Keyport projects, Keyport has been delegated STTR authority for the entirety of NAVSEA’s Phases I, II, and III

Combined SBIR and STTR obligations projected to increase from \$10M in FY16 to \$24M in FY19





Doing Business with the Navy in the Puget Sound Area

Points of Contact:

NUWC Keyport Small Business Program:

**Diane Kostelecky – smallbusinessprogram@navy.mil
360-315-6721**

NAVSUP FLC Puget Sound Small Business Program

**Lucy Leu – lucy.leu@navy.mil
360-476-1985**

NAVFAC NW Small Business Program

**Jim Niles – james.niles@navy.mil
360-396-0038**

NAVSEA PSNS

**Brenda Lancaster – brenda.lancaster@navy.mil
360-476-3342**