



Sensors and SONAR Systems Department, Code 15

Industry Day Conference 14 June 2016





Sensors & SONAR Systems Department

15 Sensors & SONAR Systems Department Head

15A Deputy Department Head

15S Administrative Assistant

1501 Director, Business Operations

15T Director, Science & Technology

Chief Scientist

159 Director, Programs & Contracts

Contracting Officer's Representative (COR)
Coordinator

15E Director, Engineering

Chief Analyst

15A Information Technology Manager

15A Customer Advocacy

Surface Ship USW

Towed Systems,
Sensors and
Acoustics

LCS ASW Mission
Package

151 Science and Technology Division

1511 Automation Algorithm Development

1512 Devices, Sensors and Materials R&D

1513 Signal Processing Algorithm Development

152 Advanced Concepts Division

1521 Developmental Systems Engineering

1522 Prototype Development

1523 Technology Integration

1524 Concepts and Experimentation

153 Sensors and Arrays Division

1531 Underwater Sound Reference

1532 Towed and Deployed Arrays Engineering

1533 Hull Arrays and Distributed Sensors Engineering

1534 Handling Systems Engineering

1535 Fleet Sensors and Cables Engineering

154 Submarine and Surveillance Systems Division

1541 Submarine and Surveillance Systems Engineering

1542 Passive Systems Engineering

1543 Submarine and Surveillance Systems Integration

1544 Submarine and Surveillance Test, Evaluation and Analysis

1545 Submarine and Surveillance Training, Logistics and Fleet Support

155 Surface Ship and Aviation Systems Division

1551 Surface and Aviation Systems Engineering

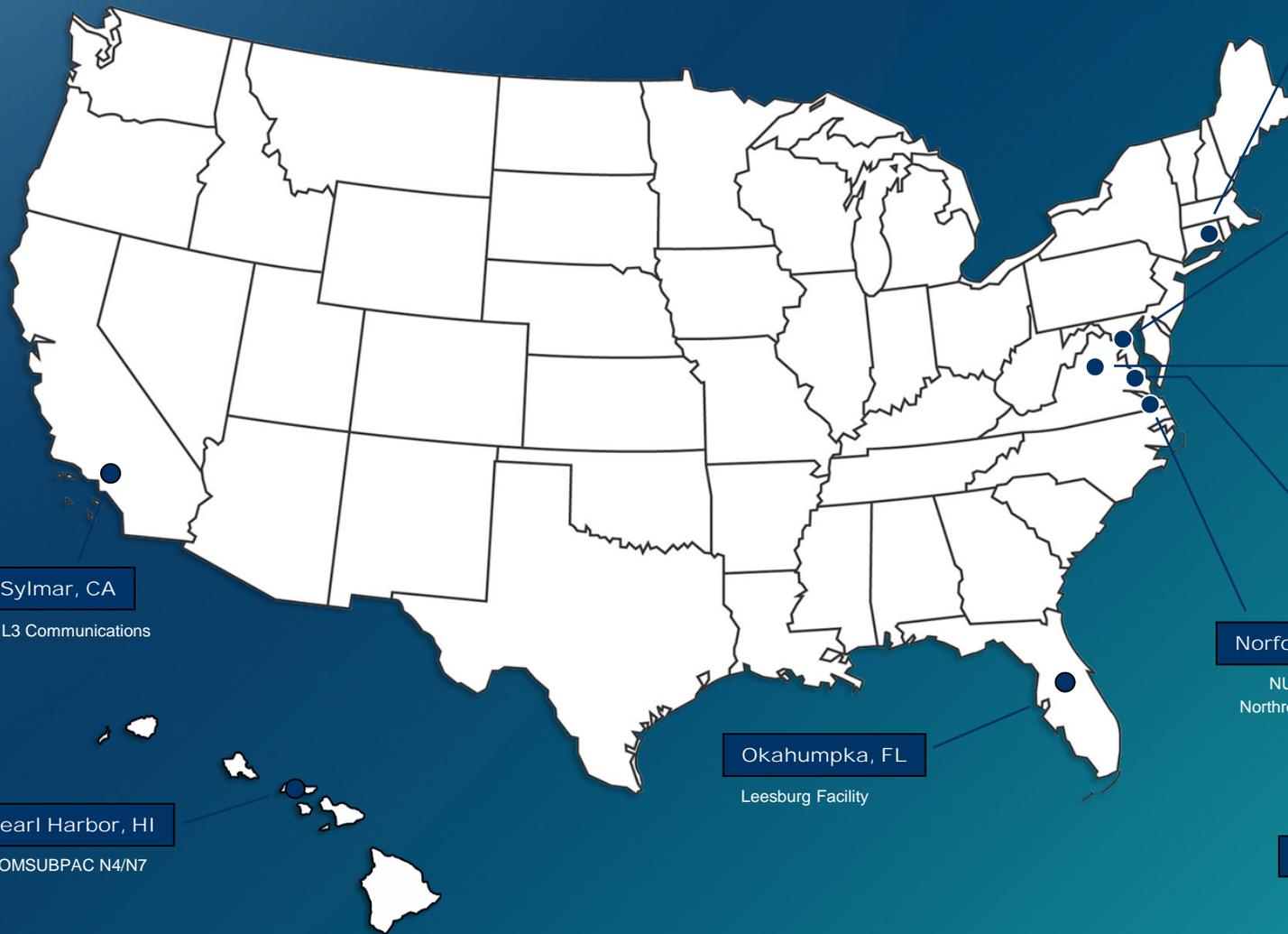
1552 Active Systems Engineering

1553 Surface and Aviation Systems Integration

1554 Surface and Aviation Test, Evaluation and Analysis

1555 Surface and Aviation Training, Logistics and Fleet Support

Personnel Located Across the Globe



Our resources and expertise support national and foreign military efforts

Science and Technology Enterprise Code 151

Technical Specialties

Research and Development in:

- Automated Algorithms
- Devices, Sensors, and Materials
- Signal Processing

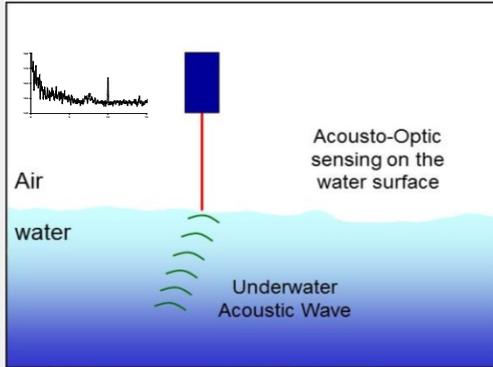
Technology Development to:

- Reduce Total Ownership Costs
- Enable New Warfighting Capabilities
- Fill Existing Capability Gaps

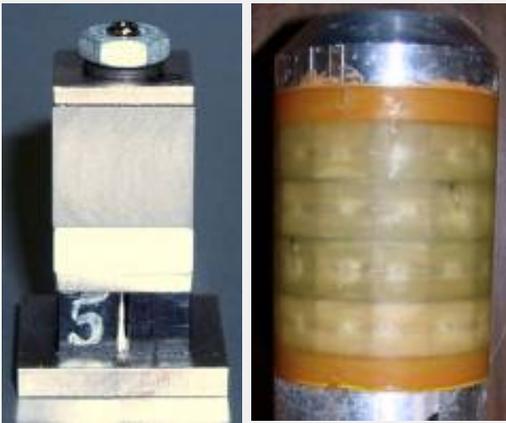
Key Programs

- Vector Sensor Development
 - Fiber Optic Sensors
 - Transduction Materials
- Detection, Classification, Localization, and Tracking
- Forward Sector Torpedo Defense
 - Acoustic-Optic Transduction
 - SONAR Automation
 - Deployable Force Protection

Acoustic-Optic Transduction



Transduction Materials



Sponsors & Stakeholders



National Leader in Naval Undersea Science & Technology

Sensors and Arrays Enterprise Code 153

Technical Specialties

- Undersea Acoustic Metrology
- Full Spectrum Systems Engineering
 - In Service Engineering Agent
 - Technical Direction Agent
 - Physics Based Modeling
 - Acoustic Augmentation
- Handling Systems Engineering
- Towed Array Design and Engineering
 - Hull Sensor Systems
 - Fleet Support
 - Undersea Cabling
- Acoustic Sensor Design and Engineering
 - System/Sensor Acquisition
- Sensor Lifecycle Planning and Support

Key Programs

- Undersea Acoustic Metrology & Acoustic Testing
- Surface and Submarine Towed Systems (Handlers and Arrays)
- Surface and Submarine Hull Sensors (Sphere, CAVES Technologies, WAA, LWWAA, LCCA, Chin, etc.)
 - Surface and Submarine Transducers, Hydrophones, Acoustic Windows
 - Undersea Cables



Sponsors & Stakeholders



We provide full spectrum Lifecycle Support for USW Sensors

Submarine and Surveillance Systems Enterprise Code 154



Technical Specialties

- Acoustic Analysis and Reconstruction
 - Systems Engineering
 - Environmental Qualification
 - Test and Integration
- At-Sea Test Planning and Execution
 - Logistics Support
 - Trainers and Training Material
 - Passive Systems

Key Programs

- Submarine SONAR System Development & Modernization
 - Forward Fit – Virginia Class
- Backfit – 688/688i, SEAWOLF Class, SSGN, SSBN
- Test Planning, Execution and Analysis
 - Communication Systems
 - Sensor Integration
- TEMPALT/OPALT Development for Special Projects

Sponsors & Stakeholders



We build and sustain the Navy's best Submarine & Surveillance Undersea Warfare Systems

Surface Ship and Aviation Systems Enterprise Code 155



Technical Specialties

- Systems Engineering
- Software Engineering
- Systems Integration
 - Active Systems
- Test & Evaluation
 - Analysis
- Logistics Support
- Training and Training Modules
 - Fleet Support
- Foreign Military Sales (FMS)
 - Torpedo Defense
 - Displays

Key Programs

- AN/SQQ-89(V) Undersea Warfare/Anti-Submarine Warfare Combat System (USW/ASWCS)
 - FMS Japan
- Fleet SONAR Self-Noise
- Littoral Combat Ship (LCS) Antisubmarine Warfare Mission Package Production
- Torpedo Warning System (TWS)
 - DDG 1000

Sponsors & Stakeholders



We build and sustain the Navy's best Surface Ship and Aviation-based Undersea Warfare Systems

Code 15 Facilities



Naval Array Technical Support Center (NATSC)



Towed Array Handler & Equipment Facility



Towed Array Handling Systems Training Facility



Transducer Standards Facility



Towed Systems Development Facility



Land Based Integration Test Site (LBITS)

SOUND SOLUTIONS
for the **WARFIGHTER**

Science & Technology Advanced Concepts

Sensors & Arrays

Surface Ship & Aviation Systems Submarine & Surveillance Systems

CUSTOMERS • STAKEHOLDERS • PARTNERS
PEO SUBS, PEO SHIPS, PEO IWS, PEO LMW, **THE FLEET**, PEO AIR, OSD, ONR, DARPA, Industry & Academia



Submarine SONAR Development & Evaluation Complex (SSDEC)



Unmanned Mission Module Test & Integration Facility



Advanced Development Laboratory



Unmanned Mission Module Test & Integration Facility



Quiet Water Tunnel



Engineering/Fiber Optic Lab



Low Frequency Facility

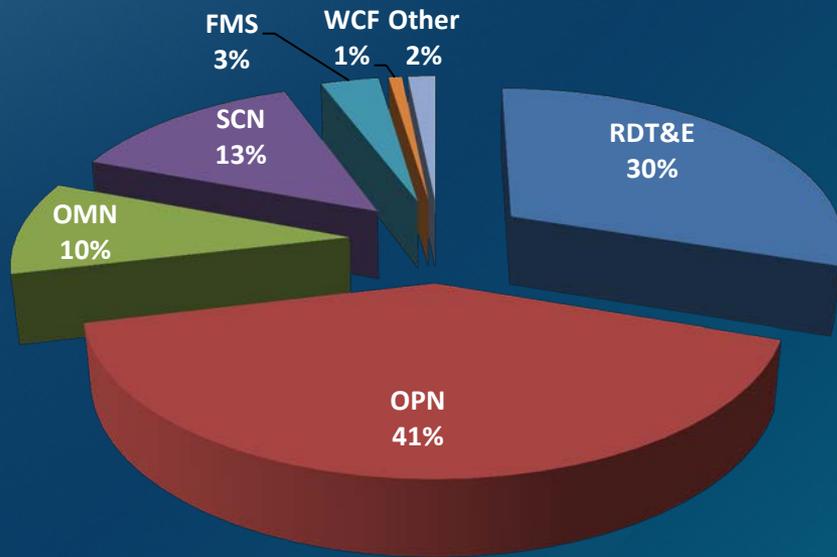


Acoustic Pressure Tank Facility

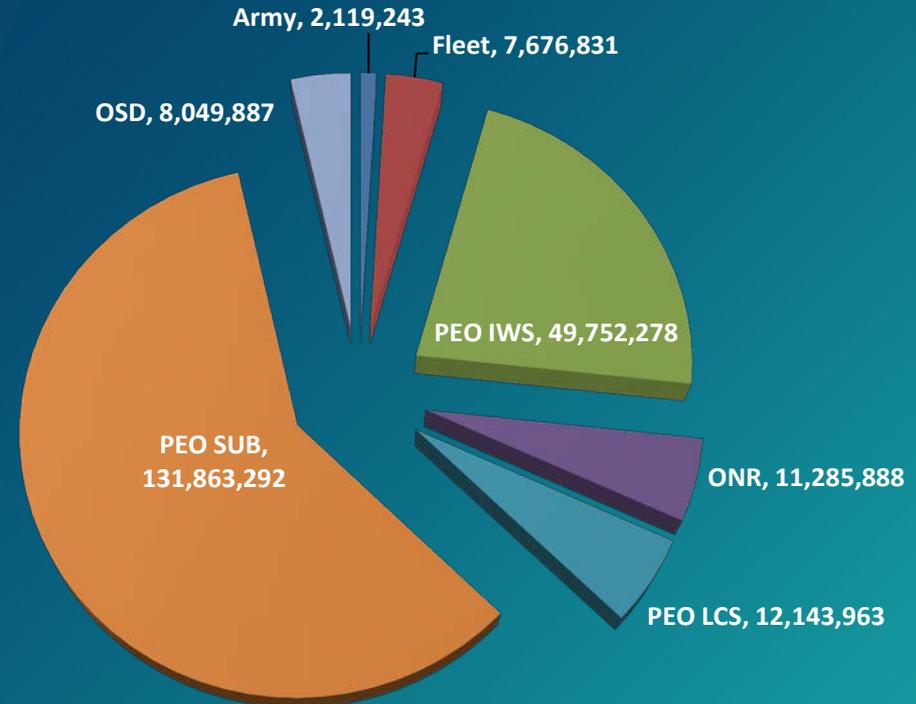
STATE-OF-THE-ART FACILITIES

FY 16 Funding Profile

FUNDING BY APPROPRIATION

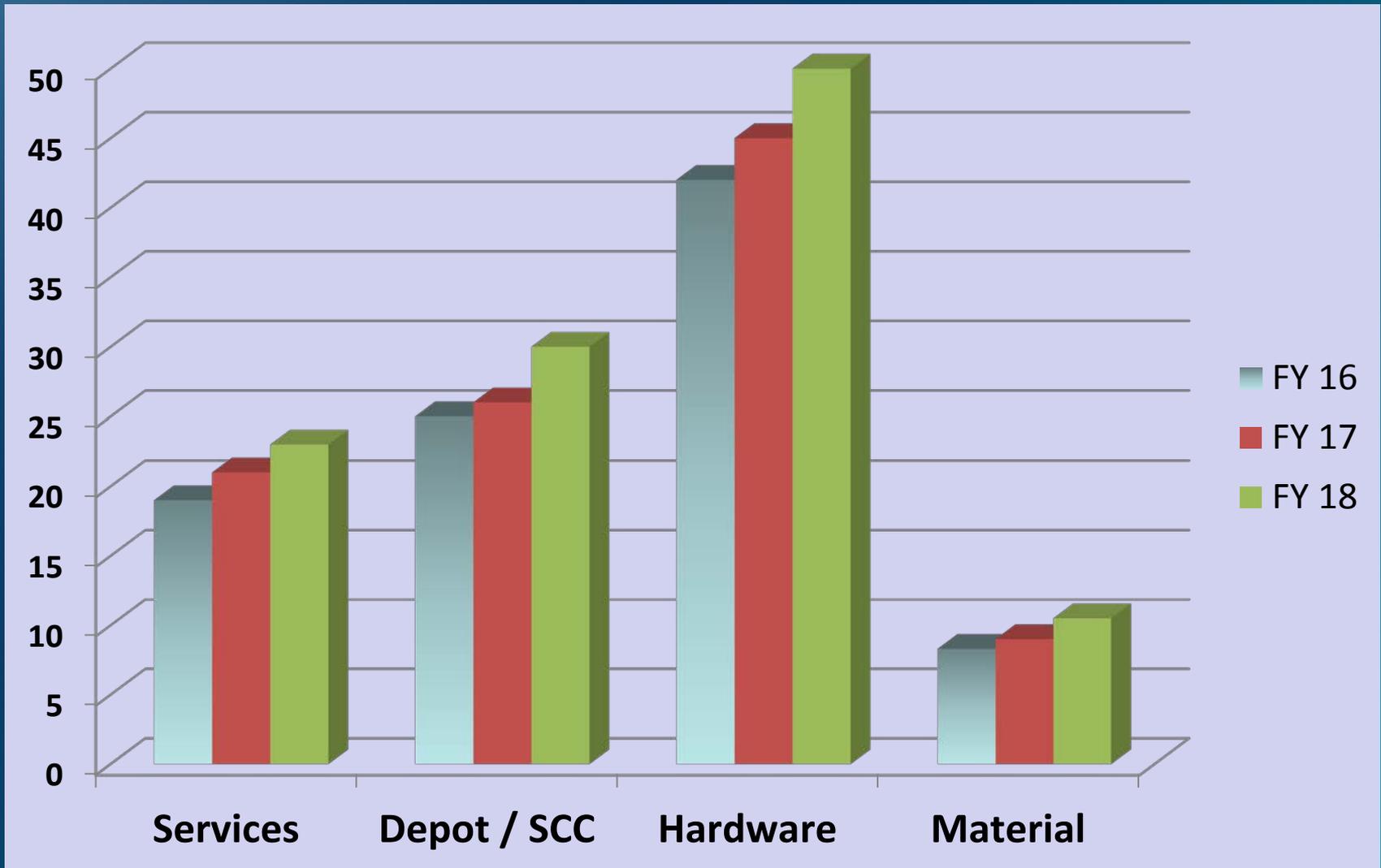


FUNDING BY SPONSOR

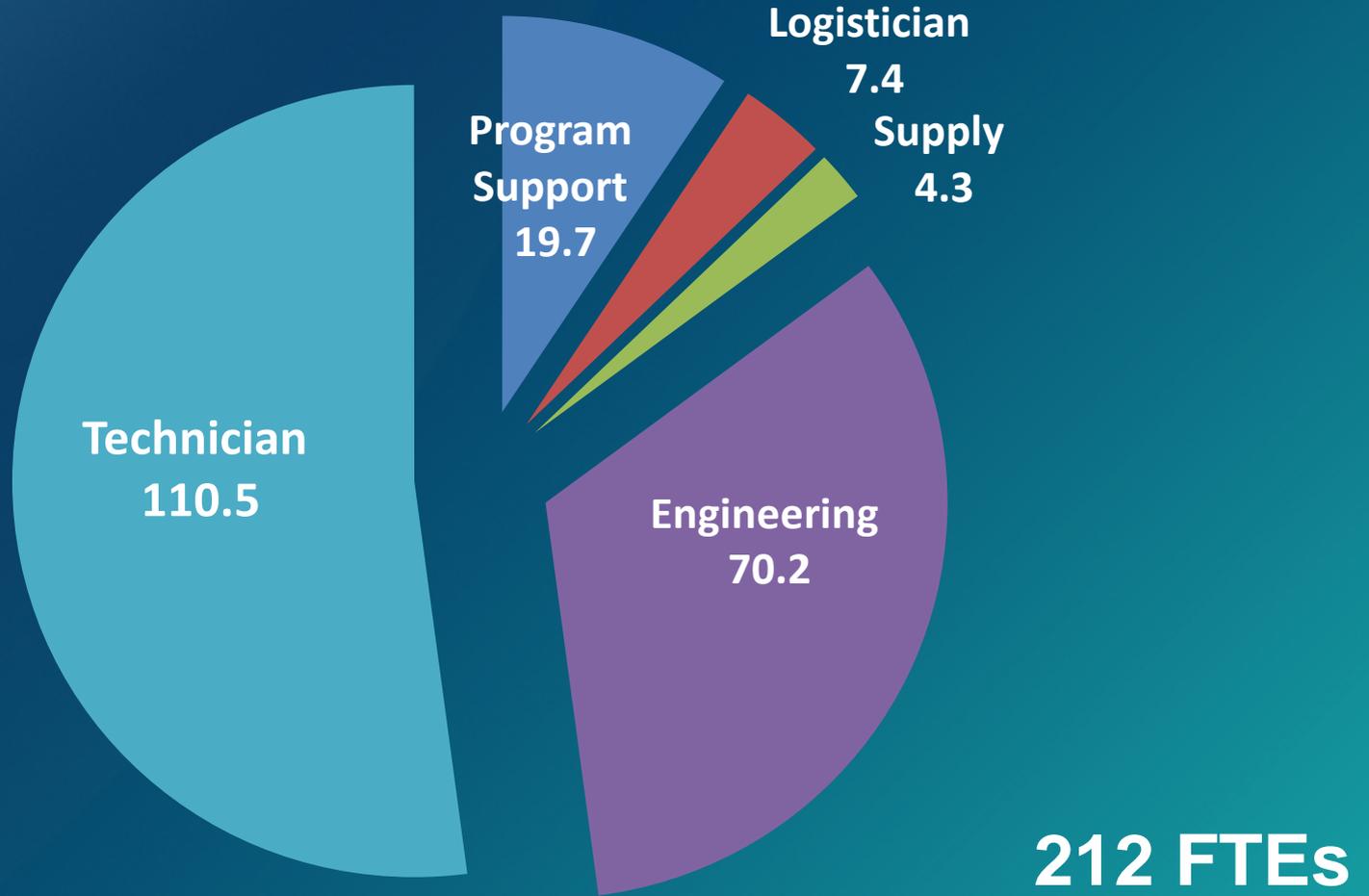


\$223M

Projected Contracting \$M's



Code 15 Outsourced WYs By Skill FY16



Sensors and SONAR Systems Department

We Advance Timely, Innovative, Integrated, Next Generation Solutions to Maintain FLEET UNDERSEA SUPERIORITY

PEOPLE



ISEA
In-service
Engineering

PRODUCTS AND CAPABILITIES



S&T
Science and
Technology

PEO-SUBS DARPA PEO-AIR
OSD ACADAMIA NAVY WARFARE CENTERS
The FLEET INDUSTRY



SPONSORS, STAKEHOLDERS, AND PARTNERS



Major Code 15 Contractors

CONTRACTOR

SCOPE

BAE Systems	Towed Systems program support TAHE Depot Software Engineering Maintenance Activity
DDL OMNI Engineering	Critical Transducer Program Tech Services
Hydroacoustics Inc.	HLF-1 Services
L-3 Services	Naval Array Technical Support Center (NATSC)
L-3 Communications Corp.	TB-23/BQ Towed Systems Repair & Support
Lockheed Martin	Towed Array Intermediate Maintenance Activity
MIKEL	System Engineering, Test & Evaluation
SyQwest	Hydrophone Production & Restoration
Sonalysts	Fleet Training Support



Code 15 Projected Contracts – Services

Contract #	Title	Current Contract Value (w options)	Incumbent	Seaport	Follow-On	Current Contract Type	Expected RFP Release	Strategy
NEW	HLF-1 Services and Hardware	N/A	N/A	N	N	Will be CPFF	June 2018	TBD (Sources Sought)
NEW	Advanced Development, Integration & Prototype	N/A	N/A	N	N	Will be CPFF	June 2018	TBD (Sources Sought)
NEW	USV	N/A	N/A	N	N	Will be CPFF	June 2018	TBD (Sources Sought)



Code 15 Projected Contracts – Depot / Service Cost Centers/Hardware

Contract #	Title	Current Contract Value (w options)	Incumbent	Seaport	Follow-On	Current Contract Type	Expected RFP Release	Strategy
7126 N401	NATSC Depot SVCS	\$35M	L3	N	Y	Will be CPFF	July 2016	Unrestricted
NEW	TR 355	N/A	N/A	N	N	Will be FFP	July 2016	TBD
NEW	DT 5920	N/A	N/A	N	N	Will be FFP	July 2016	TBD
NEW	OK-410 Production	N/A	N/A	N	N	Will be FFP	Aug 2016	TBD
NEW	HSS Cable	N/A	N/A	N	N	Will be FFP	Dec 2016	TBD

Opportunities

- **ASW Performance Analysis**
- **Distributed Sensors**
- **Environmental Analysis**
- **Cyber Security**
- **Hull Mounted Arrays**
- **Human Systems Integration**
- **Bio-Inspired Sensors**
- **Fiber Optics**
- **Advanced Sensor Development**
- **Signal Processing**
- **Simulation/Stimulation**
- **Operator, Team and Proficiency Training**
- **Towed System Reliability**
- **Transducer / Hydrophone Technology**
- **In Service Engineering**

Keys to Contracting Success:

- **Increased Competition**
- **Reduced Total Ownership Cost**
- **Advanced Planning**
- **Sources Sought**

Summary

- **Contracting Continues to be an Important Function for the Success of Sensors & Sonar Systems Programs**
 - Major Depot, Maintenance and Repair Work
 - Critical Engineering Services
 - Unique Hardware: Arrays, Transducers, Handlers, Windows, etc
- **Code 15's Contract Consolidation Plan is Being Implemented (8 down to 4)**
 - System Eng, Test & Evaluation and Software Support **AWARDED**
 - Sensors & Towed Systems Technical Services **PROPOSALS RECEIVED**
 - Towed Array IPT Hardware and Software **AWARDED**
 - Business Operations (Data Center, IT, Financial and Program Spt) **TECH EVAL COMPLETE**
- **New Innovative Contracting Approaches**
 - PEO LCS Rapid Technology Insertion (RTI) **AWARDED**
 - Advanced Development & Prototyping

Working with Industry, Academia and Navy Labs to Deliver Solutions to the Warfighter Where and When They are Needed