DON SBIR 25.4 Release 11
Topic Workshop
August 25 – 28, 2025

NAVWAR

N254-P03 Post-Quantum Encryption for Commodity Hardware

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Rules of Engagement

- Post all questions via the Q&A Component
- Session will be recorded and posted on navysbir.com

Agenda

- Background
- Topic Overview
- Clarifying Details
- Open Discussion

SBIR/STTR Program Authorities

- 15 U.S. Code §638. Research and development

  https://uscode.house.gov/view.xhtml?req=(title:15%20section:638%20edition:prelim)

- SBIR/STTR Policy Directive – provides guidance from SBA to the participating Federal agencies for the general operation of the SBIR and STTR programs.
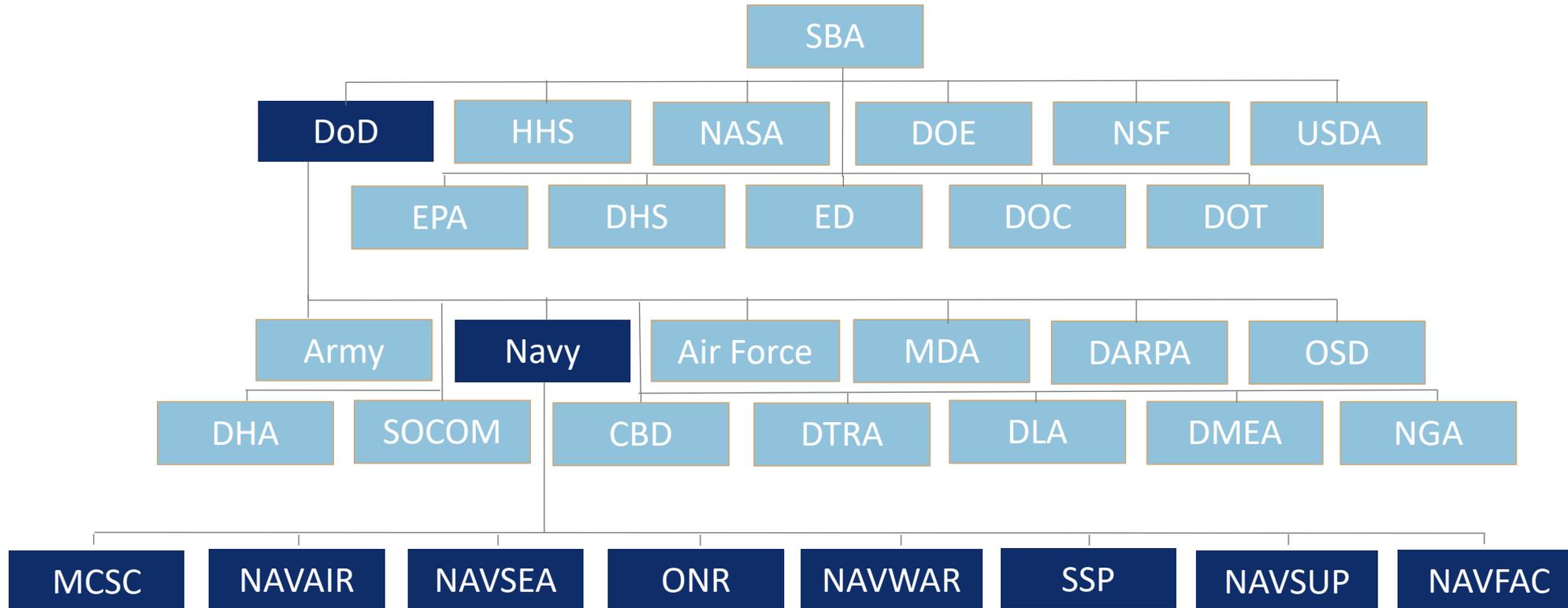
  https://www.sbir.gov/sites/default/files/2024-07/SBA%20SBIR_STTR_POLICY_DIRECTIVE_May2023.pdf

Program Goals

- Stimulate technological innovation

- Use small business to meet Federal R/R&D needs

- Foster and encourage participation in innovation and entrepreneurship

- Increase private sector commercialization of innovations derived from Federal R&D funding

- Foster technology transfer through cooperative R&D between small businesses and research institutions

Federal SBIR/STTR Programs

Organizational chart of Federal SBIR/STTR Programs:

- **SBA**
  - **DoD**
    - Army
      - DHA
      - SOCOM
    - **Navy**
      - MCSC
      - NAVAIR
      - NAVSEA
      - ONR
      - NAVWAR
      - SSP
      - NAVSUP
      - NAVFAC
    - Air Force
    - MDA
    - DARPA
    - OSD
      - CBD
      - DTRA
      - DLA
      - DMEA
      - NGA
  - HHS
  - NASA
  - DOE
  - NSF
  - USDA
  - EPA
  - DHS
  - ED
  - DOC
  - DOT

Naval SBIR/STTR Systems Commands (SYSCOM) Contacts
https://navysbir.com/poc.htm

Eligibility

- Must qualify as a small business concern as defined by 13 CFR 121.702:
  - Organized for profit, with a place of business located in the United States
  - More than 50% owned and controlled by one or more individuals who are citizens or permanent resident aliens of the United States, or by other small business concerns that are each more than 50% owned and controlled by one or more individuals who are citizens or permanent residents of the United States; and
  - No more than 500 employees, including affiliates

- Must meet the commercialization and transition rate benchmark requirements as determined by the SBA

- Small business concern can be majority-owned by multiple venture capital operating companies, hedge funds, or private equity firms
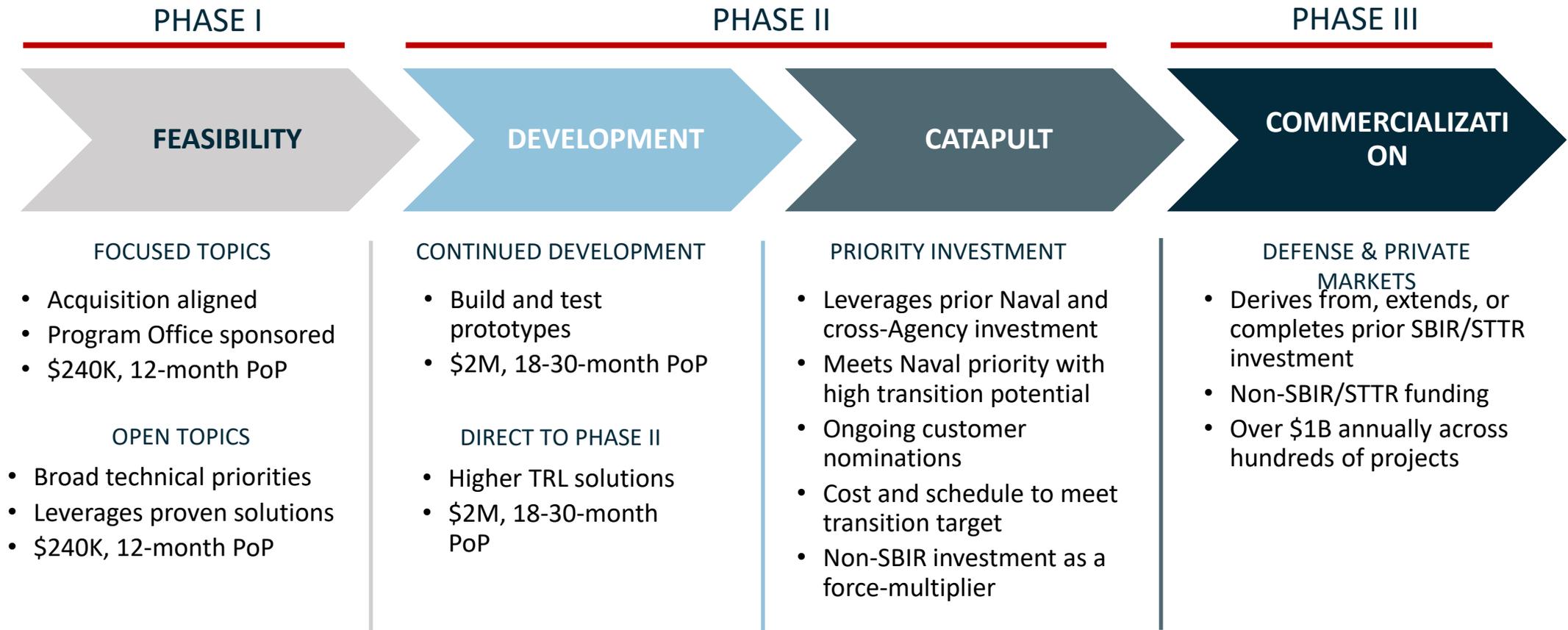
Differences between SBIR and STTR

	SBIR	STTR
Partnering Requirement	Permits partnering	Requires a non-profit research institution partner
Principal Investigator	Primary employment (>50%) must be with the small business	PI may be employed by either the research institution partner or small business
Work Requirement	May subcontract up to: 33% (Phase I) 50% (Phase II)	Minimum: 40% Small Business 30% Research Institution Partner
Program Size	3.2%	0.45%
Majority VC Ownership	Allowed by some agencies	Not allowed
Participating Agencies	11 Agencies (extramural R&D budget >$100M)	5 Agencies (extramural R&D budget > $1B)

The small business is ALWAYS the applicant and awardee.

# Execution Aligned to Mission Requirements

How We Work

PHASE I	PHASE II		PHASE III
FEASIBILITY	**DEVELOPMENT**	**CATAPULT**	**COMMERCIALIZATION**

FOCUSED TOPICS

- Acquisition aligned
- Program Office sponsored
- $240K, 12-month PoP

OPEN TOPICS

- Broad technical priorities
- Leverages proven solutions
- $240K, 12-month PoP

CONTINUED DEVELOPMENT

- Build and test prototypes
- $2M, 18-30-month PoP

DIRECT TO PHASE II

- Higher TRL solutions
- $2M, 18-30-month PoP

PRIORITY INVESTMENT

- Leverages prior Naval and cross-Agency investment
- Meets Naval priority with high transition potential
- Ongoing customer nominations
- Cost and schedule to meet transition target
- Non-SBIR investment as a force-multiplier

DEFENSE & PRIVATE MARKETS

- Derives from, extends, or completes prior SBIR/STTR investment
- Non-SBIR/STTR funding
- Over $1B annually across hundreds of projects

DoD SBIR 25.4 Release 11 - BAA Schedule

Pre-Release	Open	Close
August 6	August 27	September 24

SYSCOM	Topic
Open Topics	
MCSC	N254-P01: MCSC Open Topic for Non-Lethal Counter Personnel and Vehicle Stopping Technologies
NAVSEA	N254-P02: NAVSEA Open Topic for Modular Mine Warfare Components
NAVWAR	N254-P03: NAVWAR Open Topic for Post-Quantum Encryption for Commodity Hardware
Conventional Topics	
NAVFAC	N254-122: Artificial Hardwood Replacement for Dry Docking Blocks
NAVFAC	N254-123: Expeditionary Energy-Efficient Greywater Treatment for Reuse
NAVSEA	N254-124 TITLE: Non-Intrusive Sensing for Ship Space and Equipment Monitoring

Posting of Topics

DoD
https://www.dodsbirsttr.mil/submissions/login
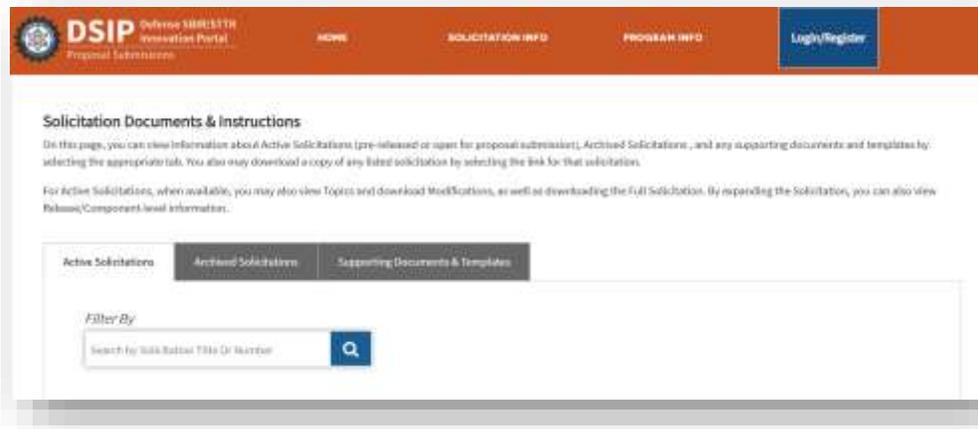
- Active solicitations & Topic Q&A
- Archived solicitations
- Training materials available on DSIP
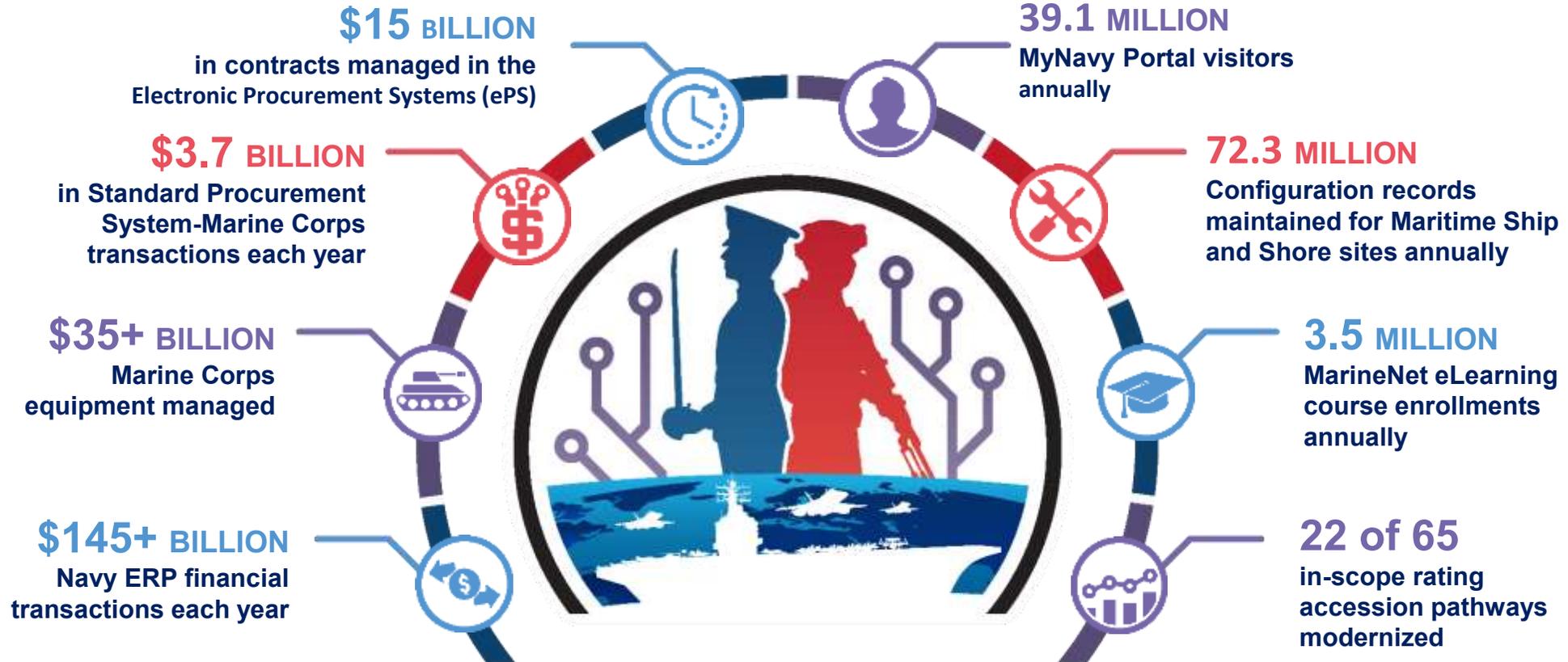
DON
https://navysbir.com/

- DON instructions
- DON topic list and descriptions
- Copy of DSIP Topic Q&A

Everything you need to know is in the BAA!

Value to the Naval Enterprise

Accomplishing the business of the DON

$15 BILLION
in contracts managed in the Electronic Procurement Systems (ePS)

$3.7 BILLION
in Standard Procurement System-Marine Corps transactions each year

$35+ BILLION
Marine Corps equipment managed

$145+ BILLION
Navy ERP financial transactions each year

39.1 MILLION
MyNavy Portal visitors annually

72.3 MILLION
Configuration records maintained for Maritime Ship and Shore sites annually

3.5 MILLION
MarineNet eLearning course enrollments annually

22 of 65
in-scope rating accession pathways modernized

Delivering effective and affordable business IT capabilities to advance the readiness of our Naval forces.

WHAT WE DO

PEO MLB partners with our customers and stakeholders to acquire creative and innovative solutions that address the complex challenges of operating a globally distributed workforce.

WHAT WE DELIVER

Our portfolio of programs delivers a broad range of defense business IT solutions to support the day-to-day administrative and operational needs of Sailors, Marines and a civilian workforce around the world.

PEO MLB PORTFOLIOS

MyNavy HR IT Solutions Services (PMW 240)

Programs:
- Navy Personnel & Pay (NP2)
- Single Point of Entry (SPOE)
- Authoritative Data Environment (ADE)
- Learning Stack (LS)
- Enterprise Customer Relationship Management (eCRM)

Capabilities:
- Workforce Development
- Personnel Management
- Recruiting and Accession
- Distribution
- Financial Management
- Organizational Management
- Fleet and Family Support

Ready Relevant Learning (RRL)

Programs:
- LOE 1: Career-Long Learning Continuums
  - Technical, professional, leadership
- LOE 2: Modern Delivery at Point of Need
  - Content modernization
  - Enabling IT
- LOE 3: Integrated Content Development
  - Rapid, responsive content control
  - Assessment

Capabilities:
- LOE 1: Learning roadmaps that link requirements with real-world Fleet needs
- LOE 2: Modernized content with multiple delivery options
- LOE 3: Reductions in cost and time to get relevant training to the Fleet

Navy ERP Financial IT Services

Programs:
- Navy Enterprise Resource Planning (ERP)
- Standard Labor Data Collection & Distribution Application (SLDCADA)

Capabilities:
- Financial Management
- Procurement
- Workforce Management
- Program/Project Management
- Business Intelligence, Reporting & Analytics
- Grants Management
- Supply Chain Management

Logistics IT Services (LOG IT)

Programs:
- Naval Maintenance, Repair & Overhaul (NMRO)
- Naval Supply Chain Management (NSCM)
- Naval Product Lifecycle Management (NPLM)
- Logistics Integrated Data Environment (LIDE)
- Integration and Infrastructure (I&I)

Capabilities:
- Product Data Management
- Maintenance
- Supply
- Data Alignment and Availability
- Aviation and Maritime Readiness

Naval Applications and Business Services (NABS)

Programs:
- Research, Development and Acquisition Information System (RDAIS)
- Naval Information Application Product Suite (NIAPS)
- Electronic Procurement System (ePS)
- Risk Management Information (RMI)
- Naval Court Martial Reporting System (NCORS)
- Force Level Integration Tool (FLINT)
- Sea Services Security Assistance Logistics and Execution (S3ALE)

Capabilities:
- Business Intelligence, Reporting & Analytics
- Foreign Military Sales Case Management
- Information/Data Management
- Legal Case Management
- Naval Capability Investment Optimization
- Risk Assessment & Management
- End-to-End Contract Management

Logistics Integrated Information Solutions Services (LI2S)

Programs:
- Global Combat Support System - Marine Corps (GCSS-MC)
- Common Logistics Command and Control System (CLC2S)
- Storage Retrieval Automated Tracking Integrated System (STRATIS)
- Transportation Capacity Planning Tool (TCPT)
- Automated Manifest System - Tactical (AMS-TAC)
- Technical Data Management (TDM)
- Logistics Data Services (LDS)

Capabilities:
- Automated Supply Chain Management
- Ground Equipment Asset Visibility/Lifecycle Management
- Supply Warehouse Management
- Transportation Planning and Management
- Operating in austere environments

### Marine Corps Manpower IT Systems Modernization (MITSM)

Programs:
- Human Resources Development Process (HRDP) Modernization
- Recruiting Modernization
- Training Modernization
- Total Force Structure Modernization
- Legacy Application Sustainment

Capabilities:
- Force Readiness
- Modeling & Data Analytics
- Talent Marketplace/Management
- Manpower Management & Assignments
- Retention & Recruiting
- Training & Education
- Pay & Personnel
- Deployment Planning
- Medical Readiness & Health Records Management

LOG IT Services Operational View
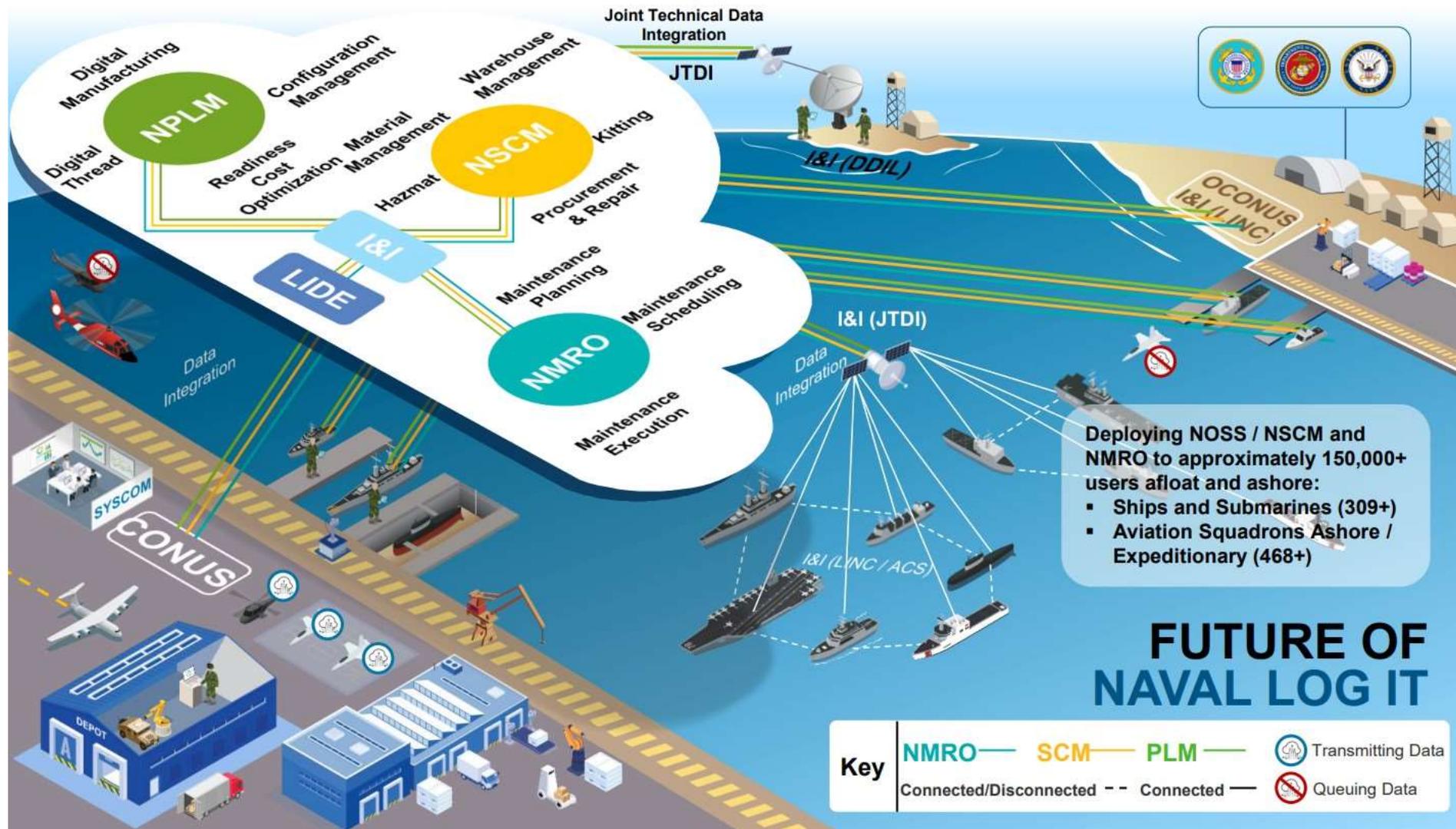
Post-Quantum Encryption for Commodity Hardware Topic Overview

What are the performance tradeoffs and options when integrating post-quantum cryptography with existing fielded systems?

1. Define and Develop "Drop-In" PQC Capabilities

2. Establish a Monitoring Framework

3. Develop a System Model

_____

4. Implement a Representative Testbed

5. Refine the Model with Collected Metrics

6. Assess NMRO System Impacts

7. Recommend Policy Updates

Clarifying Details

- Commodity hardware "Baseline"
  - 2+ servers
  - Each with at least single AMD 64-core processor and 8x128GB memory kits
- Focus on Off-Ship Communications first ie ship-to-ship and ship-to-shore
- Solutions not limited to software only
- Selected algorithms must be NIST approved or under-review
- Desired solution could inform more than just LOG IT path to quantum

- For data over-the-air, how do we:
  - Prove its secure
  - Quantify performance impact
    - User experience
    - Network effects (bandwidth requirements, etc)
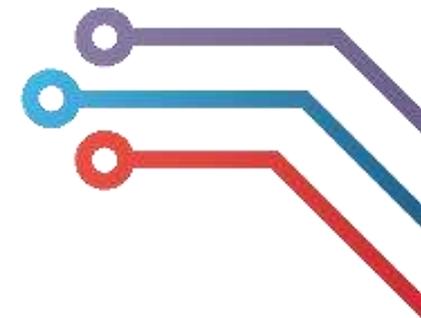
Questions?

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Technical Strategy and Outcomes

WAM Mission Outcomes	Technical Outcome Driven Metrics	Operational Metrics	Technology Strategy Pillar
User Time lost	System Availability to end users	Average System Availability (Ao) for each system or application weighted by number of users	Promote cloud adoption
Operational resiliency	Zero Trust Activity	Compliance percentage to the Zero Trust (ZT) target level activities	Defend our information
Customer satisfaction	User Experience	Average Customer Satisfaction (CSAT) score from administered Pulse Surveys	Propel Data-Driven Decisions
Cost per user	Inefficiency Reduction	Average Fiscal Year Operations & Maintenance (O&M) funds per user for each system or application	Adopt Enterprise Services
Adaptability/mobility	Time between capability deliveries	Average time between non-maintenance releases over the last twelve months for each system or application	Enable an innovative and agile culture