Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy											Date: May 2017	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604231N *I Tactical Command System*							
COST ($ in Millions)	**Prior Years**	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**Cost To Complete**	**Total Cost**
Total Program Element	806.770	75.508	40.323	55.695	-	55.695	71.345	61.044	60.324	37.922	Continuing	Continuing
0486: *Tactical Support Center*	124.551	4.921	5.244	5.665	-	5.665	5.687	5.786	5.903	6.018	Continuing	Continuing
2213: *Mission Planning*	319.764	38.993	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	358.757
3032: *NTCSS (Naval Tactical Command Spt Sys)*	73.323	11.390	13.610	4.044	-	4.044	0.000	0.000	0.000	0.000	0.000	102.367
3260: *Naval Operations Business Logistics Enterprise (NOBLE)*	0.000	0.000	0.000	19.102	-	19.102	35.038	31.721	20.202	5.191	Continuing	Continuing
3320: *TRIDENT Warrior*	11.305	2.143	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	13.448
3323: *Maritime Tactical Command & Control (MTC2)*	30.857	14.976	14.293	17.487	-	17.487	19.223	10.727	20.041	12.469	Continuing	Continuing
3324: *Navy Air Operations Command and Control (NAOC2)*	12.280	0.801	0.999	1.048	-	1.048	1.014	1.034	1.055	1.076	Continuing	Continuing
3425: *Digital Warfare Office (DWO) MBE&DT Development*	0.000	0.000	0.000	5.950	-	5.950	8.150	9.500	10.800	10.800	Continuing	Continuing
9123: *FORCEnet*	234.690	2.284	6.177	2.399	-	2.399	2.233	2.276	2.323	2.368	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Tactical Command System upgrades the Navy's Command, Control, Communications, Computer and Intelligence (C4I) systems and processes C4I information for all warfare mission areas including planning, direction and reconstruction of missions for peacetime, wartime and times of crises.

Tactical Support Center: The Tactical Mobile (TacMobile) program provides evolutionary systems and equipment upgrades to support the Maritime Patrol and Reconnaissance Force Commanders with the capability to plan, direct and control the tactical operations of Maritime Patrol and Reconnaissance Aircraft and other assigned units within their respective area of responsibility. Looking ahead, TacMobile provides critical reach-back capabilities between the Maritime Patrol and Reconnaissance Aircraft, primarily the P-8A/Poseidon, and MQ-4C/Triton, and the Maritime Intelligence Surveillance and Reconnaissance Enterprise. These operations include littoral, open ocean, and over land long-dwell surveillance, anti-surface warfare, over-the-horizon targeting, counter-drug operations, power projection, anti-submarine warfare, mining, search and rescue, indications and warnings, and special operations. The missions are supported by the Tactical Operations Centers and the Mobile Tactical Operations Centers.

Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy	Date: May 2017
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Mission Planning: The Joint Mission Planning System (JMPS) is the designated automated mission planning system for the Navy. JMPS enables weapon system employment by providing the information, automated tools, and decision aids needed to rapidly plan aircraft, weapon, or sensor missions, load mission data into aircraft and weapons, and conduct post-mission analysis. JMPS is a mission critical system which is a co-development effort between the United States Navy (USN) and United States Air Force (USAF). Common requirements are identified and capabilities are developed and prioritized in an evolutionary approach. An individual JMPS Mission Planning Environment (MPE) is a combination of the JMPS framework, common components, and the necessary system hardware required to satisfy mission planning objectives. Most Tactical Naval Aviation platforms are dependent solely on JMPS to plan precision guided munitions, sensor systems, tactical data links, secure voice communications, and basic Safety of Flight functions. The following type/model/series (T/M/S) naval aircraft are supported by JMPS: AH-1W, F/A-18 A-F, E-2C, EP-3E, EA-6B, AV-8B, S-3, V-22, Chief of Naval Air Training (CNATRA), EA-18G, MV-22, C-2, MH-53E, P-3, Aircraft Carrier Intelligence Center (CVIC), SH-60B/F, HH-60H, CH-53D/E, CH-46E, UH-1N, VH-3/VH-60, AH-1Z, UH-1Y, MH-60R/S and E-2D. All T/M/S are required to transition to Microsoft Windows 7 due to End of Life (EOL) of Microsoft XP (April 2014)using Framework (FW) Version 1.3.5. Custom support for Windows XP is planned to allow remaining naval aircraft to be supported during the transition. Future JMPS platforms include: MQ-4C (Triton) and CH-53K. The re-architecture of JMPS will support net-centric goals by providing route "publish and subscribe" capabilities, transition to 64 bit allows for memory space expansion to accommodate future Microsoft Operating Systems, emerging technologies, and critical Cyber Security updates. Funding profile includes JMPS baseline efforts for all existing T/M/S on Windows 7 32 bit framework while concurrently re-architecting to a 64 bit framework. 64-bit development requires complete software restructure to address memory limitations and system errors resulting in JMPS computer crashes. The transition from the current 32-bit architecture (4GB RAM) to a 64-bit architecture (196GB RAM) provides additional memory access, increased planning efficiencies; creating a more stabilized architecture with fewer fleet memory crashes. Delaying JMPS 64-bit transition to the fleet will cause system crashes to continue. It will also delay required mission planning fixes based upon known software obsolescence, and decreases platform stability.

Naval Tactical Command Support System (NTCSS): The NTCSS is a multi-function program designed to provide standard tactical support information systems to various afloat and associated shore-based fleet activities. The mission is to provide the Navy and Marine Corps with an integrated, scalable system that supports the management of logistical information, personnel, material and funds required to maintain and operate ships, submarines, and aircraft.

The Naval Operational Business Logistics Enterprise (NOBLE) family of programs will provide direct support to warfighter readiness with maintenance, supply, and personnel administration capabilities using an open architecture framework that incorporates business process re-engineering (BPR) allowing for the consolidation of over 23 standalone application systems. These capabilities include enhanced situational awareness, planning, execution, personnel administration, and management of maintenance and supply logistics and business functions to ships/submarines, aviation squadrons, shore operational sites, and expeditionary units with a total user base exceeding 150,000. NOBLE will meet current and emerging demands for cyber, Financial Improvement and Audit Readiness (FIAR), Navy logistics and maritime maintenance mission requirements, and eliminate over 700 application/database servers. NOBLE will deploy to Navy Enterprise Data Centers (NEDC) ashore, the Consolidated Afloat Networks and Enterprise Services (CANES) afloat, and Department of the Navy (DON) commercial cloud computing environments.

Maritime Tactical Command and Control (MTC2) is the next generation C2 solution that will deliver Battle Management Aids (BMA) and Maritime Planning Tools (MPT) to dynamically plan, direct, monitor, and assess maritime operations in support of Joint, Multi-Service, Coalition Forces planning. MTC2 will leverage a System of Services (SoServ) to deliver capabilities improving decision speed and dynamic synchronization of forces. BMAs/MPTs are small, capability-focused deliveries that can be rapidly developed, tested, and fielded. MTC2 will engage with the OPNAV-led Requirements Governance Board to define and prioritize the BMAs and MPTs that MTC2 will be on deliver and align to the PEO enterprise architecture (Consolidated Afloat Network Enterprise Service (CANES), Agile Core Services (ACS)) for

Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy	Date: May 2017
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fielding to all echelons of command (afloat and ashore) within the Navy. The program's objective is to provide a suite of maritime applications (BMAs/MPTs) that enable planning, execution, monitoring, and assessment in support of operational and tactical level of war requirements. MTC2 will field BMAs/MPTs designed to provide automated and structured support for tactical and operational planning, decision-making, and execution. MTC2 will incorporate distributed data transfer capability for enhanced operational data exchange between command and control systems, combat systems, logistics, and intelligence systems for timely threat identification, location, and status alongside blue force data. MTC2 will provide Global Force Management - Data Initiative (GFM-DI) is the Department-wide enterprise solution that enables visibility/accessibility/sharing of data applicable to the entire Department of Defense (DoD) force structure. MTC2 will be the program that fulfills a portion of the Navy's GFM-DI requirements.

Navy Air Operations Command and Control (NAOC2): NAOC2 integrates and tests Air Force program of record systems that provide an integrated and scalable planning system for standardized, secure, and automated decision support for Air Force, Joint, and Allied commanders worldwide. These programs provide automated air operations planning, execution management and intelligence capabilities at the Force level to include fleet commanders, numbered fleet commanders, Commander Carrier Strike Groups, Commander Expeditionary Strike Groups, Commander Landing Forces, and Joint Task Force Commanders. NAOC2 includes Theater Battle Management Core System (TBMCS) and Command and Control Air Operations Suite - Command and Control Information Services (C2AOS-C2IS). C2AOS-C2IS is being developed as a Service Oriented Architecture (SOA) service to allow for scalability and integration with Common Computing Environments (CCE). Continuation of these efforts will significantly enhance the Joint Force Air Component Commander and Combined Air Operations Center personnel to plan daily air operations including strike, airlift, offensive/defensive air, and refueling missions in support of combat operations, addressing the requirement of war fighter distributed planning and execution processes along with significantly improving Joint interoperability. TBMCS continues a hardware transition to CCEs such as Consolidated Afloat Networks and Enterprise Services (CANES). Currently, TBMCS is the key system that is used to conduct real world air planning in the Joint and Navy environments. C2AOS-C2IS will replace TBMCS in a SOA environment while bringing more flexibility to the war fighter.

Digital Warfare Office (DWO): Supports the development of requirements modeling and data science experimentation environment, mission area model-based engineering (MBE) teams, development of digital technical baselines, development of digital architectures, and the development of workforce training in model-based systems engineering.

FORCEnet: Initiative's mission is to deliver Information Dominance by (a) accelerating the transformation to a Distributed, Networked force; (b) achieve interoperability based on Architectures and Standards; and (c) Experiment with, evaluate and employ the enabling technologies. Effort is a non-acquisition program that is the operational instantiation of FORCEnet. The end-state is a distributed network of weapons, sensors, Command and Control (C2), platforms and warriors.

Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy					Date: May 2017
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0604231N *I Tactical Command System*		
B. Program Change Summary ($ in Millions)	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**
Previous President's Budget	73.533	36.323	46.278	-	46.278
Current President's Budget	75.508	40.323	55.695	-	55.695
Total Adjustments	1.975	4.000	9.417	-	9.417
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.400	0.000			
• SBIR/STTR Transfer	-1.426	0.000			
• Program Adjustments	0.000	4.000	9.050	-	9.050
• Rate/Misc Adjustments	0.001	0.000	0.367	-	0.367

Change Summary Explanation

Technical: Not applicable.

Schedule:

TACTICAL SUPPORT CENTER (Project 0486):
Increase in FY2018 is in support of the focus on Systems Engineering and Primary Hardware Development efforts as TacMobile approaches the Preliminary Design Review (PDR) for Increment 3, to prepare for support of ACAT I P-8A Increment 3 Integrated Test events by FY20. Specific efforts include: Engineering and development of TacMobile architecture for P-8A Applications Based Architecture (ABA) interface and building an Engineering Development Model with appropriate P-8A ABA interface to enable and test net ready application; Engineering and development of a TacMobile architecture interface for P-8A Anti-Submarine Warfare (ASW) Signals Intelligence (SIGINT); Engineering, development and integration of Multiple Security Level enclaves, or common solution to remain interoperable with P-8A security interfaces.

Naval Tactical Command Support System (NTCSS) (Project 3032):
Funding in Project 3032 decreases from FY2017 to FY2018 as NTCSS transitioned development of tactical support information systems to the Naval Operational Business Logistics Enterprise (NOBLE). Software conversion efforts for Naval Aviation Logistics Command Management Information System (NALCOMIS) applications, Optimized Intermediate Maintenance Activity (OIMA) and Optimized Organizational Maintenance Activity (OOMA), transitioned to NOBLE, Project 3260 in FY2018.

Naval Operational Business Logistics Enterprise (NOBLE) (Project 3260):
FY2018 new start.

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Maritime Tactical Command and Control (MTC2) (Project 3323):
MTC2 funding prioritized to address operational and tactical Battle Management Aids (BMAs) and Maritime Planning Tools (MPTs). MTC2 Project Description Document (PDD) outlines the initial project scope to introduce prototype software in a SIPRNET Development Environment to gain fleet feedback on capabilities and requirements for the MTC2 transition to an Acquisition Category (ACAT) program of record. Beginning in FY18, GFM-DI plans and accomplishments will be moving under the MTC2 Project and Program of Record. Increased funding in FY2018 provides the necessary resources for software development and integration necessary to be hosted on the enterprise infrastructure, system test, and production activities (to include logistics) required to deliver an operational planning tool prototype. Specific capabilities developed in FY2018 are enhanced tactical picture, web-enabled interface, plan/re-plan force allocation, collaboration planning, synchronization and early implementation of a layered cyber defense. Additionally, it provides resources necessary to investigate and transition Science and Technology products to satisfy detailed MTC2 capabilities.

Navy Air Operations Command and Control (NAOC2)(Project 3324):
United States Air Force (USAF) Command and Control Air Operations Suite-Command and Control Information Services (C2AOS-C2IS) software development delays due to software maturity and realignment of critical user requirements resulted in a schedule slip/compression for Navy integration and testing efforts. Integrated Developmental Test and Operational Tests (OT) now include Capability Package (CP) 3 in addition to CP1 and CP2, with separate OTs added for Afloat and Ashore, and has been aligned to the latest Air Force testing schedule. CP5 was originally defined as emerging requirements, but has been relabeled by USAF as C2AOS-C2IS modernization, since it will release multiple software modifications and involve multiple integration efforts.

Mission Planning (Project 2213):
Test and Evaluation:
Framework v1.3.5 MPE integration/validation has extended from 4th QTR 2015 to 4QTR 2016 to allow full fielding of Mission Planning on the F/A-18 platform. Mission Planning schedule FY17 and out is included in Mission Planning PE 0605215N.

Funding:

FORCEnet (Project 9123)

$4.000 million is required to support approved increases for the Digital Warfare Office (DWO). Funding supports development of requirements modeling and data science experimentation environment, mission area model-based engineering (MBE) teams, development of digital technical baselines, development of digital architectures, and the development of workforce training in model-based systems engineering.

DWO funding will be moved to PU 3425 starting in FY18.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy			Date: May 2017
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COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
0486: *Tactical Support Center*	124.551	4.921	5.244	5.665	-	5.665	5.687	5.786	5.903	6.018	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

TacMobile brings Enterprise Command, Control, Communications, Computers and Intelligence, Surveillance and Reconnaissance (C4ISR) to the Maritime Patrol and Reconnaissance Force (MPRF) community.

TacMobile is a long-running, multi-year acquisition program which provides Command, Control, Communications, Computers, and Intelligence (C4I) for Navy's Maritime Patrol and Reconnaissance Force (MPRF). From within Tactical Operations Centers (TOC) at well-supported airfields, TacMobile provides theater Anti-Submarine Warfare (ASW) and Intelligence Surveillance Reconnaissance (ISR) commanders a common tactical picture while providing pre-flight and post-flight support to manned and unmanned MPRF aircraft. From within Mobile Tactical Operations Centers (MTOC), TacMobile supports manned MPRF aircraft at the tactical edge of operations. TacMobile fly-away kits can support manned MPRF aircraft in short-duration expeditionary settings.

Services provided include analysis and correlation of diverse sensor information; data management support; command decision aids; rapid data communication; mission planning, evaluation and reach-back dissemination of surveillance data and threat alerts to operational users ashore and afloat, and to the Maritime Intelligence Surveillance and Reconnaissance Environment.

TOCs provide Command, Control, Communications, Computers and Intelligence (C4I) capability, air-ground, satellite and point-to-point communications systems; sensor analysis capabilities; avionics and weapons system interfaces and facilities equipment. MTOCs are scalable, mobile versions for operations from remote forward operating airfields. This program assures that existing TOCs and MTOCs are interoperable to fulfill their operational requirements. TOC/MTOC will continue to provide the ground Command and Control capabilities, reach-back and C4I interfaces for the MPRF Family of Systems (FOS) aircraft and systems evolution including P-8A Multi-mission Maritime Aircraft (MMA) baseline and Increment 2, and the development of future C4I support capabilities for the P-8A Poseidon Increment 3, Advanced Airborne Sensor (AAS), and the MQ-4C TRITON Unmanned Aerial System.

The TacMobile program follows an Evolutionary Acquisition approach for adding capabilities that maintain and support MPRF weapons systems. Current requirements for TacMobile are to adapt to a smaller footprint and scalable Network-centric Services Oriented Architecture (SOA) configuration. Additional TacMobile requirements are to simplify and streamline the Pre-Flight Insertion Data (PID) process for mission aircraft, and to satisfy the need for sensor data sharing between aircraft and the Maritime Intelligence Surveillance and Reconnaissance Enterprise.

FY18: Funding supports core TacMobile systems development and testing of Increment 3, and Technical Refresh to Increment 2.1, to maintain interoperability with P-8A Poseidon and the MQ-4C Triton. Specifically this development is intended to align and support P-8A Inc 3 Block 2 Integrated Testing beginning in FY19, increase modularity, establish additional security enclaves and reduce footprint to offset the size/weight/cube of additional required aircraft interfaces developed to support P-8A Increment 3, Advanced Airborne Sensor (AAS) and emerging Maritime Patrol and Reconnaissance Aircraft operations. Network-centric Services Oriented Architecture (SOA) and airborne C4I integration efforts continue to ensure interoperability with emerging MPRF Aircraft and Sensors, streamline Pre-Flight Insertion Data (PID), facilitate the MPRF ISR and ASW data Processing - Exploitation - Dissemination (PED) process, and reduce TacMobile footprint, enhancing mobility capabilities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Net Ready	0.938	0.938	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Articles:	-	-	-	-	-
FY 2016 Accomplishments: Developed plan of action to Integrate Services Oriented Architecture (SOA) implementations from P8 Applications Based Architecture with TacMobile architecture and leverage Tactical Operations Center Operational Control Prototype SOA development with TacMobile Services Oriented Architecture implementation based on Best of Breed from P8 Applications Based Architecture and leveraged Tactical Operations Center Operational Control Prototype SOA work - (TR 2.1.2/Inc 3). Completed analysis and initial integration of Automated Digital Network System and Full Motion Video implementations - (TR 2.1.1). Coordinated with Family of Systems Community of Interest data model development for TacMobile SOA environment instantiation with Extensible Markup Language (XML) schema and Tactical Operations Center Mobile Tactical Operations Center Content Management XML Data Dictionary - (Inc 3). Finalized TacMobile Data Strategy, began development of Information Support Plan, and drafted the Capabilities Production Document (CPD) for Increment 3, supporting P-8A Poseidon Inc 3 - (Inc 3). Continued development of Tactical Operations Center (TOC)/Mobile Tactical Operations Center (MTOC) Operational view and System view Department of Defense Architecture Framework (DoDAF) products, and integrated to the Maritime Patrol and Reconnaissance Force /Air Anti-Submarine Warfare Community of Interest Family of Systems Department of Defense Architecture Framework products - (Inc 3). Completed review of TacMobile Concept of Operations (CONOPS) in alignment with Commander Patrol and Reconnaissance Group's Family of Systems CONOPS - (Inc 3). Completed identifying requirements to evolve legacy point to point exchanges of information to utilize Services Oriented Architecture and new technologies, established plan of action to evaluate and down select sustainable technologies - (Inc 3). Refined Measures of Effectiveness to maintain integrated requirements management with Increment 3 architecture elements - (Inc 3).					
FY 2017 Plans: Continue to mature Services Oriented Architecture (SOA) implementations from P8 Applications Based Architecture with TacMobile architecture - (Inc 3). Leverage Tactical Operations Center Operational Control Prototype SOA development with TacMobile Services Oriented Architecture implementation based on Best of Breed from P8 Applications Based Architecture and leveraged Tactical Operations Center Operational Control Prototype SOA work - (Inc3). Continue Automated Digital Network System and Full Motion Video implementations - (TR 2.1.1). Mature Family of Systems (FoS) Community of Interest data model development for TacMobile SOA environment instantiation with Extensible Markup Language (XML) schema and Tactical Operations Center Mobile Tactical Operations Center Content Management XML Data Dictionary - (Inc 3). Continue evolving TacMobile Data Strategy, Information Support Plan, and Capabilities Production Document for Increment 3, supporting P-8A Poseidon Inc 3 - (Inc 3). Finalize TOC/MTOC Operational view					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
and System view Department of Defense Architecture Framework (DoDAF) products, and integrate to the Maritime Patrol and Reconnaissance Force /Air Anti-Submarine Warfare Community of Interest FoS DoDAF products - (Inc 3). Continue review of TacMobile Concept of Operations (CONOPS) in alignment with Family of Systems CONOPS and P8 CONOPS - (TR 2.1.1). Mature identifying requirements to evolve legacy point to point exchanges of information to utilize Services Oriented Architecture and new technologies and down select sustainable technologies - (Inc 3). Mature refining Measures of Effectiveness to maintain integrated requirements management with Increment 3 architecture elements - (Inc 3). ***FY 2018 Base Plans:*** Continuing FY18 requirements and funding are consolidated under "TacMobile Increment 2.1" and "TacMobile Increment 3.0" efforts within this PE. ***FY 2018 OCO Plans:*** N/A					
Title: Tactical Mobile Acoustic Support System (TACMASS) ***Articles:*** ***FY 2016 Accomplishments:*** Completing implementation of P-8A Poseidon Increment 2 Engineering Change Proposal (ECP) 2 - (FR40) and prepared to commence implementation of P-8A Poseidon Increment 2 ECP 3 - (FR50 / Inc 3). Finalizing designs to commence development of TacMobile Multistatic Active Coherent Attack system in support of P-8A Poseidon Increment 3 upgrades - (Inc 3). ***FY 2017 Plans:*** Validate and test P8 Increment 2 Engineering Change Proposal (ECP) 3 Multistatic Active Coherent (MAC) upgrades and functionality (TR 2.1.1). Mature requirements development for MAC Enhancements (MAC-E) and commence design of MAC-E - (Inc 3). ***FY 2018 Base Plans:*** Continuing FY18 requirements and funding are consolidated under "TacMobile Increment 2.1" and "TacMobile Increment 3.0" efforts within this PE. ***FY 2018 OCO Plans:*** N/A	0.736 -	0.736 -	0.000 -	0.000 -	0.000 -
Title: Aircraft Interfaces ***Articles:***	0.883 -	0.883 -	0.000 -	0.000 -	0.000 -

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
FY 2016 Accomplishments: Continued test and production of P8 Poseidon Increment 2 Engineering Change Proposal (ECP) 1 and ECP 2 required TacMobile support - (TR 2.1.1). Continued supporting all P-8A Poseidon Increment 2 Operational Evaluations - (TR 2.1.1). Finishing Advanced Airborne Systems (AAS) and TacMobile stack integration - (TR 2.1.1). Supported P8 Poseidon Increment 3 Applications Based Architecture Preliminary Design Review (PDR) 1 and Test and Evaluation prototype development - (Inc 3). Began to integrate interface design for Net Enabled Weapon and T-Sized Stores - (Inc 3). Finalized implementation of P-8A Poseidon Fly Away Kits, for media grooming and split deployment support - (TR 2.1.1). ***FY 2017 Plans:*** Complete testing of TacMobile support for P8 Poseidon Increment 2 Engineering Change Proposal (ECP) 1 and ECP 2 - (TR 2.1.1). Complete support for all P-8A Poseidon Increment 2 Operational Evaluations - (TR 2.1.1) Conduct end to end development testing of Advanced Airborne Systems (AAS) and TacMobile stack integration, prepare to support AAS Initial Operational Test and Evaluation (IOT&E) - (TR 2.1.1). Continue support P8 Poseidon Increment 3 Applications Based Architecture Design Reviews and Test and Evaluation prototype development - (Inc 3). Integrate support for Net Enabled Weapon and T-Sized Stores - (TR 2.1.2). Begin integration of P-8A media grooming and Command Control Communications Computers Intelligence (C41) Fly Away Kits - (TR 2.1.1). Install TacMobile Advanced Airborne Sensor (TMAAS) stack Engineering Development Model in Tactical Operations Center Jacksonville for Operational Testing (TR 2.1.1 Ph2). ***FY 2018 Base Plans:*** Continuing FY18 requirements and funding are consolidated under "TacMobile Increment 2.1" and "TacMobile Increment 3.0" efforts within this PE. ***FY 2018 OCO Plans:*** N/A					
Title: Tactical Data Links	0.160	0.160	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2016 Accomplishments: Completed design for selected Tactical Targeting Network Technology and Multifunctional Information Distribution System Joint Tactical Radio System Courses of Action - (TR 2.1.1.2). Defined requirements analysis on Common Data Link Upgrade, Broadcast Intelligence Analysis, Joint Range Extension, Third Party Targeting, High Frequency Internet Protocol, Link 16 updates - (TR 2.1.1.2). ***FY 2017 Plans:***					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Commence communications upgrade design/integration/development including New Technology-Common Data Link Upgrade, Broadcast Intelligence Analysis, Joint Range Extension, Third Party Targeting, High Frequency Internet Protocol, and Link 16 updates (TR 2.1.2 /Inc 3). ***FY 2018 Base Plans:*** Continuing FY18 requirements and funding are consolidated under "TacMobile Increment 2.1" and "TacMobile Increment 3.0" efforts within this PE. ***FY 2018 OCO Plans:*** N/A					
Title: Enterprise Solutions	0.780	0.880	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2016 Accomplishments: Continued maturing the Applications Based Architecture (ABA) requirements definition in preparation to commence ABA design and development for TacMobile systems - (Inc 3). Completed Data Storage Architecture Upgrade development and implementation - (TR 2.1.1). Continued development of Multiple Security level Enclaves and conducted requirements definition and analysis to commence design of Distributed Common Ground System Navy implementation - (Inc 3). Conducted technology evaluation and requirements definition for development of next generation Mass Storage requirement - (Inc 3). ***FY 2017 Plans:*** Continue Applications Based Architecture (ABA) requirements analysis, and continue ABA design and development for implementation on TacMobile systems - (Inc 3). Complete Data Storage Architecture Upgrade integration to support follow on test and evaluation - (TR 2.1.1). Continue development of Multiple Security level Enclaves and design of Distributed Common Ground System Navy implementation - (Inc 3). Continue development of next generation Mass Storage requirement - (Inc 3). ***FY 2018 Base Plans:*** Continuing FY18 requirements and funding are consolidated under "TacMobile Increment 2.1" and "TacMobile Increment 3.0" efforts within this PE. ***FY 2018 OCO Plans:*** N/A					
Title: Command and Control (C2)	0.402	0.607	0.000	0.000	0.000
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 0486 / *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
FY 2016 Accomplishments: Completed preparation for Tactical Operations Center Operational Control Prototype Services Oriented Architecture (SOA) design leveraging P-8A Applications Based Architecture, completed TacMobile SOA requirements analysis to commence design/development, leveraging Poseidon Data modeling, security, applications and architecture - (Inc 3). Completed requirements analysis, continued development, and commenced implementation of Advanced Airborne Sensor system as part of TacMobile (TM) Multiple Independent Levels of Security - (TR 2.1.1). Completed evaluation of Global Command and Control System - Maritime Group Level 4.1 in support of Triton Mission Control System interface and conducted requirements analysis to assess next generation Maritime Tactical Command and Control - (TR 2.1.1). ***FY 2017 Plans:*** Further mature Tactical Operations Center Operational Control Prototype Services Oriented Architecture (SOA) design leveraging P-8A Applications Based Architecture into TacMobile SOA requirements analysis and design/development including Cross Domain Solutions. Continue to leverage Poseidon Data modeling, security, applications and architecture - (Inc 3). Continue Engineering Development Model development with High Assurance Guard, and continue implementation of Advanced Airborne Sensor system as part of TacMobile Multiple Independent Levels of Security - (Inc 3). Integrate Global Command and Control System - Maritime Group Level 4.1 in support of Triton Mission Control System interface and continue requirements analysis to assess next generation Maritime Tactical Command and Control - (TR 2.1.1 / TR 2.1.2). ***FY 2018 Base Plans:*** Continuing FY18 requirements and funding are consolidated under "TacMobile Increment 2.1" and "TacMobile Increment 3.0" efforts within this PE. ***FY 2018 OCO Plans:*** N/A					
Title: Maritime Patrol and Reconnaissance Force (MPRF) Interoperability/TacMobile Footprint Reduction	1.022	1.040	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2016 Accomplishments: Continued design model development of automated TacMobile system functionality to reduce operator workload, to offset increasing Maritime Patrol and Reconnaissance Force Intelligence Surveillance and Reconnaissance Mission/Function/Task -(Inc 3). Completed stakeholder Size Weight Power and Cooling requirements analysis and commenced Tactical Operations Center (TOC)/Mobile Tactical Operations Center (MTOC) design - (TR 2.1.1). Continued implementing all hardware design optimizations which reduce and consolidate TacMobile					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 0486 / *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
footprint and any Maritime Patrol and Reconnaissance Aircraft media changes - (TR 2.1.1). Commenced Wide Band SatCom requirements analysis and continued utilizing technology that best optimizes data transfer rates - (TR 2.1.2). Continued with development of Multiple Security level Enclaves, matured Higher than SECRET enclave's requirements analysis and design for TacMobile - (Inc 3). ***FY 2017 Plans:*** Refine design of TacMobile system functionality to reduce operator workload, to offset the increasing Mission/ Function/Task of the Maritime Patrol and Reconnaissance Force Intelligence Surveillance and Reconnaissance - (TR 2.1.1). Initiate stakeholder Size Weight Power and Cooling design analysis and commence TOC/ MTOC design - (TR 2.1.2/Inc 3). Complete implementing all hardware design optimizations which reduce and consolidate TacMobile footprint and any Maritime Patrol and Reconnaissance Aircraft media changes - (TR 2.1.1). Commence integration of P-8 Inc 3 Block 1 design elements - (TR 2.1.1). Commence Wide Band SatCom design utilizing technology that continues best optimizes data transfer rates - (TR 2.1.2 /Inc 3). Continue with development of Multiple Security level Enclaves, mature Higher Than SECRET enclave's requirements analysis and design for TacMobile - (Inc 3). Continue defining Processing Exploitation and Dissemination support requirements for the wide range of P8A missions and Anti-Submarine Warfare and Intelligence Surveillance and Reconnaissance data elements - (Inc 3). ***FY 2018 Base Plans:*** Continuing FY18 requirements and funding are consolidated under "TacMobile Increment 2.1" and "TacMobile Increment 3.0" efforts within this PE. ***FY 2018 OCO Plans:*** N/A					
Title: TacMobile Increment 2.1 ***Articles:*** ***FY 2016 Accomplishments:*** N/A ***FY 2017 Plans:*** N/A ***FY 2018 Base Plans:*** Efforts previously funded within this PE under "Net Ready", "Tactical Mobile Acoustic Support System (TACMASS)", "Aircraft Interfaces", "Tactical Data Links", "Enterprise Solutions", and "MPRF Interoperability/ TacMobile Footprint Reduction" requirements were consolidated under "TacMobile Increment 2.1" in FY18.	0.000 -	0.000 -	2.181 -	0.000 -	2.181 -

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 0486 / *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Begin phased design and engineering of Technical refresh 2.1.2, including P-8A/Poseidon and MQ-4C/ Triton interoperability related communications upgrades (Global broadcast System (GBS), Super High Frequency (SHF) and Tactical Data Links (TADIL); Command, Control, Communications and Intelligence (C4I) enhancements (Common Operational Picture (COP) and Integrated Broadcast Service (IBS)), and appropriate subsystem refreshes based on P-8A and MQ-4 collaborative efforts. These efforts include: INTEROPERABILITY: Continue Automated Digital Network System and Full Motion Video implementations following external stakeholder transition to ADNS Inc 3 infrastructure - (TR 2.1.1/2.1.2). SYSTEM UPGRADES: Continue design model development of automated TacMobile system functionality to reduce operator workload, and offset increasing Maritime Patrol and Reconnaissance Force Intelligence Surveillance and Reconnaissance Mission/Function/Task - (TR 2.1.1); Implement fleet change requests into TR 2.1.2 - (TR 2.1.2); Complete design and integration for selected Joint Tactical Radio System (BU-2) - (TR 2.1.2). MODERNIZATION: Complete integration of follow on Ultra High Frequency (UHF)/Very High Frequency (VHF) Satellite Communications (SATCOM) sub system - (TR 2.1.1); Evaluate options for Global Broadcast System subsystem modernization - (TR 2.1.2); Evaluate options for SHF subsystem modernization - (TR 2.1.2); Evaluate options for Tactical Data Links modernization - (TR 2.1.2); Complete requirements analysis, assess options, and begin integration of solutions to modernize or replace current generation Global Command and Control System Maritime - (TR 2.1.2). ***FY 2018 OCO Plans:*** N/A					
Title: TacMobile Increment 3.0 ***Articles:*** ***FY 2016 Accomplishments:*** N/A ***FY 2017 Plans:*** N/A ***FY 2018 Base Plans:*** Effort previously funded within this PE under "Net Ready", "Tactical Mobile Acoustic Support System (TACMASS)", "Aircraft Interfaces", "Tactical Data Links", "Enterprise Solutions", and "MPRF Interoperability/ TacMobile Footprint Reduction" requirements were realigned to "TacMobile Increment 3.0" in FY18.	0.000 -	0.000 -	3.484 -	0.000 -	3.484 -

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 0486 / *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Continue development for TacMobile Increment 3 in preparation for P-8A and other Integrated Test events in FY19. Complete updates to Increment 3 Capabilities Production Document (CPD) based upon Joint Requirements Oversight Council (JROC) and Fleet review. These efforts include: INTEROPERABILITY: Design and develop TacMobile architecture for P-8A Applications Based Architecture (ABA) interface. Build Engineering Development Model with appropriate P-8A ABA interface to enable net ready application - (Inc 3.0); Complete TacMobile Data Strategy and Information Support Plan for Increment 3.0, supporting P-8A Poseidon Inc 3 - (Inc 3.0); Design and develop TM architecture/interface for P-8A Anti-Submarine Warfare (ASW) Signals Intelligence (SIGINT) and track management requirements in support of P-8A mission systems - (Inc 3.0); Mature requirements development for Multistatic Active Coherent (MAC) Enhancements (MAC-E) and commence design for MAC-E integration - (Inc 3.0); Continue communications upgrade design/integration/ development for P-8A interoperability and optimization: Common Data Link Upgrades, Broadcast Intelligence Analysis, Joint Range Extension, Third Party Targeting, High Frequency Internet Protocol, Link 16 updates, and Wideband SatCom design/technology implementation - (Inc 3.0); Further mature architecture, development and integration of Multiple Security Level enclaves or common solution to remain interoperable with P-8A security interfaces - (Inc 3.0); Interface with Intelligence community to define Processing, Exploitation, and Dissemination CONOPS and reach-back support requirements for integrating the wide range of P-8A missions and Anti-Submarine Warfare and Intelligence Surveillance and Reconnaissance data elements with the Maritime Intelligence Surveillance and Reconnaissance Environment. Implement data strategy with automation, SOA, and other schemas for increased interoperability and efficiency - (Inc 3.0); Develop TacMobile environment to align with Family of Systems Community of Interest data management model schema - (Inc 3.0); Finalize TOC/MTOC Operational view and System view Department of Defense Architecture Framework (DoDAF) products and align with the Maritime Patrol and Reconnaissance Force /Air Anti-Submarine Warfare Community of Interest Family of Systems Department of Defense Architecture Framework products - (Inc 3); Continue integration of Navy enterprise solutions for Common Operational Picture (COP) management (in synch with Distributed Common Ground System Navy (DCGS-N), Undersea Warfare-Decision Support System (USW-DSS)) - (Inc 3.0). SYSTEM UPGRADES: Continue building Engineering Development Model with interfaces to P-8A system upgrades and TacMobile Multiple Independent Levels of Security - (Inc 3.0); Implement fleet and engineering change requests into Inc 3 design - (Inc 3.0). MODERNIZATION: Continue integration of next generation Mass Storage solution - (Inc 3.0); Continue integration of enterprise solutions for Multiple Security Level networks - (Inc 3.0); Complete Services Oriented Architecture (SOA) requirements analysis. Begin TM modernization development efforts to integrate SOA architecture - (Inc 3.0); Continue stakeholder Size Weight					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 0486 / *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Power and Cooling (SWAPC) design analysis and integrate SWAPC reductions into TOC/MTOC design - (Inc 3.0). ***FY 2018 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	4.921	5.244	5.665	0.000	5.665

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• OPN/2246: *MPRF Mission Support*	13.725	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	90.351
• OPN/2906: *TacMobile*	13.600	27.927	31.925	7.900	39.825	31.371	32.120	32.784	32.901	Continuing	Continuing

Remarks

Maritime Patrol & Reconnaissance Force (MPRF) Mission Support Systems
OPN-BLI2906 funding summary only reflects TacMobile portion of the BLI funding

D. Acquisition Strategy

Evolutionary Acquisition - Increment 2.0 provided enhanced Beyond Line of Sight (BLOS) Global Information Grid (GIG) reach back capability, and supports Maritime Situational Awareness connectivity enhancements for data exchange with Maritime Patrol and Reconnaissance Force (MPRF) aircraft and with Coalition data networks. It incorporated Anti-Submarine Warfare (ASW) acoustical analysis improvements and new P-3C aircraft ASW interfaces. Increment 2.1 supported migration to follow on Global Command and Control System - Maritime (GCCS-M) version 4.0.3 and introduction of the P-8A Poseidon. Tech Refresh 2.1.1 supports technical engineering changes associated with the introduction of P-8A Poseidon Increment 2, MQ-4C Triton, Advanced Airborne Sensor (AAS), migration to GCCS-M 4.1 Group Level, and transition to WIN7 baselines. Increment 3 will incorporate support for other Maritime Patrol and Reconnaissance Force (MPRF) Family of Systems (FOS) Aircraft Systems, as they transition to a Services Oriented Architecture (SOA).

E. Performance Metrics

The primary metrics utilized by the TacMobile program development process, include achieving/maintaining all required Interface Exchange Requirements (IER's) and successful achievement of 100% of Key Performance Parameters for incremental upgrade threshold capabilities, as observed by Commander Operational Test Force representatives during Operational Evaluation. TacMobile Inc 2.1 development supported increased IER requirements of 486% from 112 to 544. Development to support these new IER's tapered off in FY-12 as the Increment entered the Operational Evaluation Phase. Development focus then shifted to efforts required to retain fielded IER's and update IER's to comply with emerging and evolving standards associated with P-8A Poseidon Increment 2, and the MQ-4C Triton Unmanned Aerial System (UAS), other Maritime Patrol and Reconnaissance Force (MPRF) Family of Systems (FOS) Aircraft and Systems, and evolving operational employment concepts. Increment 3 development will increase IER's by extending the TacMobile core to extend integrated capabilities into Higher Than SECRET enclaves and Services Oriented Architecture (SOA). The quantification of the increase in IER's will be dependent upon final requirements which are still being defined.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *Tactical Command System*	Project (Number/Name) 2213 / *Mission Planning*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
2213: *Mission Planning*	319.764	38.993	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	358.757
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Starting in FY17, Mission Planning (PU 2213) portion of the Tactical Command PE has been moved to Mission Planning PE (0605215N). The Joint Mission Planning System (JMPS) is the designated automated mission planning system for the Navy. JMPS enables weapon system employment by providing the information, automated tools, and decision aids needed to rapidly plan aircraft, weapon, or sensor missions, load mission data into aircraft and weapons, and conduct post-mission analysis. JMPS is a mission critical system which is a co-development effort between the United States Navy (USN) and United States Air Force (USAF). Common requirements are identified and capabilities are developed and prioritized in an evolutionary approach. An individual JMPS Mission Planning Environment (MPE) is a combination of the JMPS framework, common components, and the necessary system hardware required to satisfy mission planning objectives. Most Tactical Naval Aviation platforms are dependent solely on JMPS to plan precision guided munitions, sensor systems, tactical data links, secure voice communications, and basic Safety of Flight functions. Over 40 (T/M/S) naval aircraft are supported by JMPS. All T/M/S are required to transition to Microsoft Windows 7 due to End of Life (EOL) of Microsoft XP (April 2014) using Framework (FW) Version 1.3.5. Custom support for Windows XP is planned to allow remaining naval aircraft to be supported during the transition. Future JMPS platforms include; MQ-4C (Triton), P-8, and CH-53K. The re-architecture of JMPS will support net-centric goals by providing route "publish and subscribe" capabilities, transition to 64-bit allows for memory space expansion to accommodate future Microsoft Operating Systems, emerging technologies, and critical Cybersecurity updates. Funding profile includes JMPS baseline efforts for all existing T/M/S on Windows 7 32-bit framework while concurrently re-architecting to 64-bit framework. Increment 4 which encompasses 64-bit development requires complete software restructure to address memory limitations and system errors resulting in JMPS computer crashes. The transition from the current 32-bit architecture (4GB RAM) to a 64-bit architecture (196GB RAM) provides additional memory access, increased planning efficiencies; creating increased stability in the architecture resulting in fewer fleet memory crashes. Delaying JMPS 64-bit transition to the fleet will allow system crashes to continue.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: JMPS Framework (FW) & Common Components (CC) Development	19.836	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: Due to the end of Microsoft support for Windows XP in April 2014, JMPS framework (FW) is required to transition to Windows Operating System (OS) 7. FW Version 1.3.5 incorporates Windows OS 7 and provides additional capabilities for all naval aircraft to include air drop, air refueling and enhanced installation. Funding for FW will be used to support system engineering processes, management interface controls, software architectural analysis, requirements management and a centralized website for Mission Planning Environment (MPE) developers. FW 1.5 will be incorporated in future FW versions to address migration to .NET environment and to enable interoperability improvements through utilization of services. FW 64 bit development efforts commenced in FY14. If a transition to 64-Bit architecture is delayed or minimized, the fleet will experience					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 2213 / *Mission Planning*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
increased mission planning interruptions (crashes) with future Mission Planning Environments (MPE) as a result of legacy and new 32-Bit applications shared utilization of the 4G RAM limitation associated with 32-bit operating system (64-Bit provides 192GB RAM). Additionally, as platform(s) requirements emerge for new and enhanced mission planning capabilities, the demand for more complex integrated applications and software products increases. Without this planned transition to a 64-Bit architecture, the volume of integrated mission planning capability for the fleet will be limited and restricted. Common Components software updates augment core mission planning capabilities across multiple T/M/S. ***FY 2016 Accomplishments:*** Continue the development of JMPS Increment 4 Core 64-bit Framework transition development activities. Major events include development of Cybersecurity safeguards, development of additional JMPS help features, and complex conversion of Source Lines of Code (SLOC) from Visual Basic to a newer .NET language for the JMPS Framework Core (Basic Flight Planning Capabilities) and JMPS Framework Common Components for MPE/UPCs, including significant efforts for the F/A-18 A-F platforms and E/A-18G. In addition, efforts include initiation of 64-bit transition development for JMPS Common Components used by multiple platforms. Common Components include Close-Air Support (CAS), Air Refueling, Air Drop, Intervisibility Mask (IVM), Global Positioning System (GPS) Crypto, and GPS Predictor capabilities. The transition of these Common Components is aligned to meet the platform(s) requirements for new and enhanced mission planning capabilities in a 64-bit environment. The Increment 4/64-bit transition is required to address current physical memory access and utilization limitations associated with the fielded Mission Planning Environment (MPE); thus eliminating system interruptions (crashes) while improving mission planning performance for the fleet. ***FY 2017 Plans:*** N/A ***FY 2018 Base Plans:*** N/A ***FY 2018 OCO Plans:*** N/A					
Title: Joint Mission Planning System Expeditionary (JMPS-E)	0.646	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: JMPS Expeditionary (JMPS-E): The goal of the JMPS-E team is to produce a scalable, tailorable, mission planning and execution monitoring tool for Amphibious Squadron staffs. The primary focus of this system is to provide an automated capability to assist planners with mission analysis, course of action					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 2213 / *Mission Planning*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
development and automated creation of doctrinal orders based on planning data in the system. Current expeditionary planning is done manually on paper charts. JMPS-E will provide a digital map enabling better response times to changing plans, easier distribution of planning artifacts and a reduction in human error during the planning process. The variety and geographically separated nature of forces involved with Ship to Shore Maneuver amplifies the need for web-based technologies to enable collaborative planning, improve overall situational awareness and enable the monitoring of mission execution from different locations. The primary outputs are tasking orders, route plans, battlespace geometries and decision briefs. The system will also incorporate modeling and simulation tools to rehearse and deconflict mission plans. ***FY 2016 Accomplishments:*** Complete development and intermediate testing of JMPS-E MPE Version 2.0.1. Development of JMPS-E MPE Version 2.1 (64-bit OS) ***FY 2017 Plans:*** N/A ***FY 2018 Base Plans:*** N/A ***FY 2018 OCO Plans:*** N/A					
Title: Mission Planning Environment (MPE) Integration and Test ***Articles:***	18.511 -	0.000 -	0.000 -	0.000 -	0.000 -
Description: Mission Planning Environment (MPE) Integration and Test efforts support the Navy's developmental testing/operational testing, integration and system of system testing for MPE fielding. Efforts consist of integration of components provided by various developers into a platform-centric MPE and testing of the integrated MPE. Life-cycle management, with MPE integration and testing results in a consistent and repeatable system configuration that enables stability and reliability. Due to the end of Microsoft support for Windows XP in April 2014, JMPS MPE's are currently in the process of transitioning to Windows Operating System (OS) 7; with custom support available for the transition of all remaining naval aircraft. ***FY 2016 Accomplishments:***					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 2213 / *Mission Planning*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Integration and test of MPEs in support of over 40 aircraft T/M/S. Triton and CH-53K platform integration to meet IOC. Initiation of efforts associated with JMPS 64-bit Framework segmentation efforts. Complete Joint Mission Planning System Windows 7 operating system transition for all platforms. ***FY 2017 Plans:*** N/A ***FY 2018 Base Plans:*** N/A ***FY 2018 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	38.993	0.000	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• OPN/2876: *Naval Mission Planning Systems*	13.737	14.273	11.971	2.550	14.521	12.188	12.408	12.660	12.911	Continuing	Continuing
• RDTE/3858,5302,5380: *Air Force Mission Plng Systems*	55.835	78.323	75.567	-	75.567	75.113	87.771	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

Engineering Manufacturing Development efforts: The strategy entails a two-phased evolutionary approach to acquire the initial Joint Mission Planning System (JMPS) development effort. Phase I was a combined United States Air Force (USAF) / United States Navy (USN) effort that obtained various studies, extensive joint requirements analysis, design to cost estimates, an architecture concept, and development statement of work. The Program's Phase I was planned to identify reduced costs strategies through software reuse from both USN Tactical Automated Mission Planning Systems and USAF Air Force Mission Support Systems (AFMSS) legacy mission planning programs. Additionally, this phase provided a risk reduction plan by identifying the most effective migration of existing mission planning systems. Phase I was awarded to two contractors, Post Phase I during the down select process, one contractor was selected to develop the JMPS architecture work and Version 1.0 basic flight planning components. Phase II focused on strike planning requirements (i.e., support Precision Guided Missions and other tactical data load intensive missions) in order to migrate platforms from legacy mission planning systems to JMPS. The USAF continued development of JMPS Version 1.3 and has contractual control of the program which is facilitated via a Mission Planning Enterprise Contract. The USN continued limited development in JMPS Version 1.2 which was focused on helicopter platform migrations. USN integration and fielding strategy changed to support a Mission Planning Environment focus, where framework and common components are integrated as bundled packages and fielded by airwings. The completion of Phase II is targeted for Joint Mission Planning System (JMPS) Version

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
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1.3.5, which focuses on a transition to Windows 7 that both the USAF and USN will use. As platforms plan their migration to JMPS, the acquisition strategy, plan, and baseline will be updated in order to drive the retirement of legacy mission planning systems.

E. Performance Metrics

Average time to plan a flight: Threshold value is < 1 hour average time to plan a flight that includes a Military Training Route (MTR), routing to and from the MTR, kneeboard card production, Instrument Flight Rules (IFR) flight planning materials and a Data Transfer Device (DTD) Load.
Objective value is < 30 minutes average time to plan a flight that includes a MTR, routing to and from the MTR, kneeboard card production, IFR flight planning materials and a DTD Load.

Interoperability: Threshold value is 100% of top level Interoperability Exchange Requirements (IERs) designated critical will be satisfied.
Objective value is 100% of top level IERs will be satisfied.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *Tactical Command System*	Project (Number/Name) 3032 / *NTCSS (Naval Tactical Command Spt Sys)*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
3032: *NTCSS (Naval Tactical Command Spt Sys)*	73.323	11.390	13.610	4.044	-	4.044	0.000	0.000	0.000	0.000	0.000	102.367
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Naval Tactical Command Support System (NTCSS) is a multi-function program designed to provide standard tactical support information systems to various afloat and associated shore-based fleet activities. The mission is to provide the Navy and Marine Corps with an integrated, scalable system that supports the management of logistical information, personnel, material, and funds required to maintain and operate ships, submarines, and aircraft. FY2018 Funding:

(1) Provides for the design, development, and testing of NTCSS Open Architecture (OA) development efforts to include: Global Individual Component Repair List (G-ICRL); Beyond Capability of Maintenance Interdiction (BCM-I); Operational Supply (O-Supply), which includes Table of Allowance & Personal Gear Issue (TOA/PGI) and Total Material Visibility & Requisition Management (TMV/RM); and software code conversion of NTCSS legacy software code to a modern Java software code system. (2) Provides for the transition of the current client-server architecture to a service-oriented architecture (SOA) and web-based services (NTCSS OA). This will align with the initiative to bring Navy systems into a common computing environment afloat, interface with Navy Enterprise Resource Planning (ERP) ashore, and provide a more flexible system platform with greater responsiveness to security, information assurance, functional, and system requirements and with greater speed to capability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: NTCSS (Naval Tactical Command Spt Sys)	11.390	13.610	4.044	0.000	4.044
Articles:	-	-	-	-	-
Description: Maintenance and Supply Management Capability					
FY 2016 Accomplishments: Completed development of Beyond Capability of Maintenance Interdiction (BCM-I) design. Continued design, development, and testing efforts for NTCSS Open Architecture (OA), to include Global Individual Component Repair List (G-ICRL); O-Supply to include Table Of Allowance & Personal Gear Issue (TOA/PGI); Total Material Visibility & Requisition Management (TMV/RM), and software code conversion of NTCSS legacy software code to a modern JAVA-based system. Conducted pre-acquisition activities for open architecture follow-on efforts.					
FY 2017 Plans: Conducted Developmental Testing (DT) of BCM-I and G-ICRL. Continue software code conversion of the Relational Supply (R-Supply) application. Continued pre-acquisition activities for open architecture follow-on efforts. Commenced software conversion efforts for Optimized Intermediate Maintenance Activity (OIMA)					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3032 / *NTCSS (Naval Tactical Command Spt Sys)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
and Optimized Organizational Maintenance Activity (OOMA) Naval Aviation Logistics Command Management Information System (NALCOMIS) applications, converting six million lines of NTCSS legacy software code to a modern Java-based system providing a more flexible system platform with greater responsiveness to security, information assurance, functional, and system requirements and with greater speed to capability (this effort transitions to Naval Operations Business Logistics Enterprise (NOBLE) project 3260 in this PE). ***FY 2018 Base Plans:*** Conduct DT and Operational Testing (OT) for O-Supply to include TOA/PGI. Complete software code conversion of the R-Supply application. Complete pre-acquisition activities for open architecture follow-on efforts. ***FY 2018 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	11.390	13.610	4.044	0.000	4.044

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• OPN/2611: *Naval Tactical Command Support System*	14.416	12.336	10.741	-	10.741	9.946	17.657	18.015	18.375	Continuing	Continuing

Remarks

D. Acquisition Strategy

NTCSS Open Architecture (OA), Global Individual Component Repair List (G-ICRL) and Beyond Capability of Maintenance Interdiction (BCM-I), and O-Supply serve as the initial steps toward achieving the NTCSS OA "End-State" by introducing web-enabled technology, promoting data sharing with operational fleet forces, and utilization of Navy Data Centers to expose data and move workload ashore. Additionally, the software code conversion efforts will start the modernization of legacy software code applications into a modern Java software code (web-enablement). The Java code will incorporate current Information Technology (IT) best practices and eliminate current information assurance (IA) vulnerabilities experienced with a client/server system. This strategy provides the foundation for NTCSS to migrate to a full service-oriented architecture-based enterprise system.

E. Performance Metrics

NTCSS Open Architecture (OA), G-ICRL and BCM-I, eliminate documentation inefficiencies at the Fleet Readiness Centers (FRCs). O-Supply (Table of Allowance & Personal Gear Issue (TOA/PGI) and Total Material Visibility & Requisition Management (TMV/RM) provide centralized and standardized management of PGI and TOA material through the utilization of Navy Data Centers. O-Supply prevents millions of dollars in operational forces obligation losses through improved requisition

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3032 / *NTCSS (Naval Tactical Command Spt Sys)*

management. Additionally, the software code conversion efforts will lay the foundation for migration to a service-oriented architecture (SOA) for NTCSS. SOA lowers system maintenance costs when compared to maintaining the current, client-server architecture.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *Tactical Command System*	Project (Number/Name) 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
3260: *Naval Operations Business Logistics Enterprise (NOBLE)*	0.000	0.000	0.000	19.102	-	19.102	35.038	31.721	20.202	5.191	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops and improves the Navy's tactical support information systems. It includes Naval Operational Supply System (NOSS), Naval Aviation Maintenance System (NAMS), Naval Operational Maintenance Enterprise (NOME), and Naval Administration and Personnel System (NAPS).

NOSS will provide enterprise-wide automation of supply, inventory, and financial functions to the Naval supply system. NOSS incorporates commercial best practices (e.g., Amazon, Wal-Mart, UPS, FedEx, etc.); NOSS will aggregate and analyze logistics data using business intelligence technologies, provide for total asset visibility, optimize business processes at the tactical echelon (field-level) and enterprise support activities, accelerate the ordering/re-ordering process, and permit monitoring of shipments. NOSS will maintain compliance with statutory, regulatory, and policy mandates of Financial Improvement Audit Requirements (FIAR). NOSS will aggregate and analyze operational data in a Business Intelligence (BI) framework to enable historical and predictive common operating pictures for logistics and readiness performance and requirements. FY2018 funding provides for acquisition documentation development to support a Milestone B/C decision. FY2018 funding provides for NOSS systems engineering analysis and design efforts leading up to a NOSS Build Decision 1 (BD1).

NAMS will provide an enterprise-wide aviation maintenance support capability that services all levels of aviation maintenance (organizational, intermediate, and depot) for over 2,100 Navy and Marine Corps aircraft. NAMS will identify and assign aviation artisans, and track all levels of aviation maintenance to completion. Aircraft availability and mission-capable rates will increase with the elimination of current inefficiencies; there will be a reduction in total ownership costs. FY2018 funding provides for software conversion efforts of Naval Aviation Logictics Command Management Information System (NALCOMIS) applications. FY2018 funding provides for NAMS acquisition documentation development to support a NAMS Milestone B/C decision leading to a NAMS BD1.

NOME will provide standardized operational business processes for afloat maritime maintenance activities to all naval ships. NOME will provide end-to-end component tracking, reduce administration time by identifying and assigning artisans to repair shipboard equipment, support moving major repair work ashore, and enable exploitation of embedded sensors in weapon systems that will trigger repair action notification. FY2018 funding provides for a NOME Analysis of Alternatives (AoA). FY2018 funding provides for NOME acquisition documentation development to support a NOME Milestone B/C decision leading to a NOME BD1.

NAPS will provide Navy-wide personnel and administration data sharing across shipboard and shore-based information systems. This will eliminate redundant personnel data entry, reduce total ownership costs, and standardize the way personnel and administration data are shared across the Navy. NAPS provides for the efficient use of maintenance personnel with better job/task and personnel skill matching. FY2018 funding provides for a NAPS AoA. FY2018 funding provides for NAPS acquisition documentation development to support a NAPS Milestone B/C decision leading to a NAPS BD1.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Naval Operational Supply System (NOSS)	0.000	0.000	14.202	0.000	14.202
Articles:	-	-	-	-	-
FY 2016 Accomplishments: N/A					
FY 2017 Plans: N/A					
FY 2018 Base Plans: Develop acquisition documentation in support of a Naval Operational Supply System (NOSS) Milestone B/C decision leading to a Build Decision 1 (BD 1). Perform systems engineering analysis, system design efforts, and software development for NOSS BD 1.					
FY 2018 OCO Plans: N/A					
Title: Naval Aviation Maintenance System (NAMS)	0.000	0.000	2.400	0.000	2.400
Articles:	-	-	-	-	-
FY 2016 Accomplishments: N/A					
FY 2017 Plans: N/A					
FY 2018 Base Plans: Continue software conversion/modernization efforts for Optimized Intermediate Maintenance Activity (OIMA) and Optimized Organizational Maintenance Activity (OOMA) Naval Aviation Logictics Command Management Information System (NALCOMIS) applications (previously funded under Naval Tactical Command Support System (NTCSS) 3032). Prepare/develop acquisition documentation in support of a NAMS Milestone B/C decision leading to a NAMS Build Decision 1 (BD 1).					
FY 2018 OCO Plans:					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
N/A					
Title: Naval Operational Maintenance Enterprise (NOME) ***Articles:*** ***FY 2016 Accomplishments:*** N/A ***FY 2017 Plans:*** N/A ***FY 2018 Base Plans:*** Conduct Analysis of Alternatives (AoA) for Naval Operational Maintenance Enterprise (NOME). Prepare/develop acquisition documentation in support of NOME Milestone B/C decision leading to a Build Decision 1 (BD 1). ***FY 2018 OCO Plans:*** N/A	0.000 -	0.000 -	1.500 -	0.000 -	1.500 -
Title: Naval Administration and Personnel System (NAPS) ***Articles:*** ***FY 2016 Accomplishments:*** N/A ***FY 2017 Plans:*** N/A ***FY 2018 Base Plans:*** Conduct Analysis of Alternatives (AoA) for NAPS. Prepare/develop acquisition documentation in support of a NAPS Milestone B/C decision leading to a BD 1. ***FY 2018 OCO Plans:*** N/A	0.000 -	0.000 -	1.000 -	0.000 -	1.000 -
Accomplishments/Planned Programs Subtotals	0.000	0.000	19.102	0.000	19.102

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

D. Acquisition Strategy

NOBLE will employ an evolutionary acquisition strategy. Software development will be comprised of multiple builds, each with increasing net-centric services capability. NOBLE is planned as a software-only program, dependent on the Navy Common Computing Environment (CCE). Hardware infrastructure will be provided by CANES, Integrated Shipboard Network System (ISNS), Navy Marine Corps Intranet (NMCI), Next Generation Enterprise Network (NGEN), OneNET (the OCONUS (outside of continental United States) network), and the Department of Navy commercial cloud computing environments. NOBLE's primary contracting method for software development will be competitive award.

E. Performance Metrics

Successfully achieve Milestone B/C decisions for NOSS, NAMS, NOME, and NAPS.

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *Tactical Command System*	Project (Number/Name) 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NOSS Software Development	TBD	TBD : TBD	0.000	0.000		0.000		12.077	Jul 2018	-		12.077	Continuing	Continuing	Continuing
NOSS System Engineering	WR	SPAWARSYSCEN PAC : San Diego, CA	0.000	0.000		0.000		0.375	Oct 2017	-		0.375	Continuing	Continuing	Continuing
NAMS System Engineering	WR	SPAWARSYSCEN : San Diego, CA	0.000	0.000		0.000		0.750	Oct 2017	-		0.750	Continuing	Continuing	Continuing
NOME Analyis of Alternatives (AoA)	TBD	TBD : TBD	0.000	0.000		0.000		1.500	Nov 2017	-		1.500	Continuing	Continuing	Continuing
NAPS AoA	TBD	TBD : TBD	0.000	0.000		0.000		1.000	Nov 2017	-		1.000	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		15.702		-		15.702	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NOSS Developmental Test & Evaluation (Documentation)	WR	NAVSUP : Mechanicsburg, PA	0.000	0.000		0.000		0.250	Oct 2017	-		0.250	Continuing	Continuing	Continuing
NOSS Operational Test & Evaluation (Documentation)	WR	COTF : Norfolk, VA	0.000	0.000		0.000		0.250	Oct 2017	-		0.250	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		0.500		-		0.500	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NOSS System Engineering Support	WR	SPAWARSYSCENPAC : San Diego, CA	0.000	0.000		0.000		0.250	Oct 2017	-		0.250	Continuing	Continuing	Continuing
NAMS System Engineering Support	WR	SPAWARSYSCENPAC : San Diego, CA	0.000	0.000		0.000		0.250	Oct 2017	-		0.250	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NOSS Program Management Support	C/CPFF	SeaPort : San Diego, CA	0.000	0.000		0.000		1.000	Nov 2017	-		1.000	Continuing	Continuing	Continuing
NAMS Program Management Support	C/CPFF	SeaPort : San Diego, CA	0.000	0.000		0.000		1.400	Nov 2017	-		1.400	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		2.900		-		2.900	-	-	-

	Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.000		19.102		-		19.102	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: FY 2018 Navy		**Date:** May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

Fiscal Year	2017				2018				2019				2020				2021				2022				2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones Naval Aviation Maintenance System (NAMS)									MS B/C ▲										BLD 1 FD ▲				BLD 2 FD ▲							
Software Deliveries NAMS															BLD 1 SW ▲						BLD 2 SW ▲									
Test & Evaluation Milestones NAMS																			BLD 1 DT/OT ▲				BLD 2 DT/OT ▲							

DT - Developmental Test; OT - Operational Test; AoA - Analysis of Alternatives; MS B - Milestone B; MS C - Milestone C; FD - Fielding Decision; BLD - Software Build

Exhibit R-4, RDT&E Schedule Profile: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

Fiscal Year	2017				2018				2019				2020				2021				2022				2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones Naval Operational Maintenance Enterprise (NOME)								AoA ▲				MS B/C ▲											BLD 1 FD ▲						
Software Deliveries NOME																				BLD 1 SW ▲								
Test & Evaluation Milestones NOME																							BLD 1 DT/OT ▲					

DT - Developmental Test; OT - Operational Test; AoA - Analysis of Alternatives; MS B - Milestone B; MS C - Milestone C; FD - Fielding Decision; BLD - Software Build

Exhibit R-4, RDT&E Schedule Profile: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

Fiscal Year	2017				2018				2019				2020				2021				2022				2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones Naval Administration and Personnel System (NAPS)							AoA ▲				MS B/C ▲												BLD 1 FD ▲						
Software Deliveries NAPS																			BLD 1 SW ▲									
Test & Evaluation Milestones NAPS																							BLD 1 DT/OT ▲					

DT - Developmental Test; OT - Operational Test; AoA - Analysis of Alternatives; MS B - Milestone B; MS C - Milestone C; FD - Fielding Decision; BLD - Software Build

Exhibit R-4, RDT&E Schedule Profile: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

Fiscal Year	2017				2018				2019				2020				2021				2022				2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones Naval Operations Supply System (NOSS)							MS B/C ▲									BLD 1 FD ▲				BLD 2 FD ▲								
Software Deliveries NOSS												BLD 1 SW ▲						BLD 2 SW ▲						BLD 3 SW ▲				
Test & Evaluation Milestones NOSS																BLD 1 DT/OT ▲				BLD 2 DT/OT ▲								

DT - Developmental Test; OT - Operational Test; AoA - Analysis of Alternatives; MS B - Milestone B; MS C - Milestone C; FD - Fielding Decision; BLD - Software Build

Exhibit R-4A, RDT&E Schedule Details: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3260				
Naval Administration and Personnel System (NAPS) Analysis of Alternatives (AoA)	3	2018	3	2018
Naval Operational Supply System (NOSS) Milestone B/C	3	2018	3	2018
Naval Operational Maintenance Enterprise (NOME) Analysis of Alternatives (AoA)	4	2018	4	2018
Naval Aviation Maintenance System (NAMS) Milestone B/C	1	2019	1	2019
NAPS Milestone B/C	3	2019	3	2019
NOME Milestone B/C	4	2019	4	2019
NOSS Build 1 Release	4	2019	4	2019
NAMS Build 1 Release	3	2020	3	2020
NOSS Build 1 Developmental/Operational Test (DT/OT)	4	2020	4	2020
NOSS Build 1 Fielding Decision (FD)	4	2020	4	2020
NOSS Build 2 Release	2	2021	2	2021
NAMS Build 1 Developmental/Operational Test (DT/OT)	3	2021	3	2021
NAPS Build 1 Release	3	2021	3	2021
NAMS Build 1 Fielding Decision (FD)	3	2021	3	2021
NOME Build 1 Release	4	2021	4	2021
NOSS Build 2 FD	4	2021	4	2021
NOSS Build 2 DT/OT	4	2021	4	2021
NAMS Build 2 Release	1	2022	1	2022
NAPS Build 1 Developmental/Operational Test (DT/OT)	3	2022	3	2022
NOME Build 1 Developmental/Operational Test (DT/OT)	3	2022	3	2022
NAMS Build 2 DT/OT	3	2022	3	2022

Exhibit R-4A, RDT&E Schedule Details: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
NOME Build 1 Fielding Decision (FD)	3	2022	3	2022
NAPS Build 1 Fielding Decision (FD)	3	2022	3	2022
NAMS Build 2 FD	3	2022	3	2022
NOSS Build 3 Release	4	2022	4	2022

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *Tactical Command System*	Project (Number/Name) 3320 / *TRIDENT Warrior*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
3320: *TRIDENT Warrior*	11.305	2.143	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	13.448
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Trident Warrior (TW) was transferred from 0604231N to 0606355N from FY17 forward.

A. Mission Description and Budget Item Justification

TW enables early delivery of Information Warfare (IW) capabilities to the warfighter via Fleet-directed TW operational events. Integrates stand-alone systems and efforts to achieve substantially enhanced capability, demonstrates/tests these capabilities in both laboratory and operational environments, and evaluates their effectiveness. Develops supporting concepts and Concept of Operations to improve warfighting effectiveness. Coordinates IW efforts with other Service/Joint/Department of Defense/ National efforts to ensure Joint/Interagency/Allied/Coalition applicability and interoperability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Trident Warrior	2.143	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2016 Accomplishments: -Conducted analysis of TW 15 executed experiments and determined recommended next steps for Naval Warfare Development Center (NWDC). -In accordance with standardized procedures derived from experimentation best practices, coordinated TW participant efforts with specific goal identification, risk identification, and experiment plans to include data requirements and collection. -Coordinated TW participant efforts to achieve required installation and security certifications, accreditations and approvals. -Provided subject matter experts (SMEs) for core ship services during the experimentation period. -Provided independent experts to coordinate the establishment of, and compliance with, experiment plans and to lead analysis effort and provide unbiased assessment to decision makers for initiatives designated by NWDC. -Provided results to government sponsors to support the program's Planning, Programming, Budgeting, and Execution Process (PPBE) and engineering recommendations. -Planned and executed TW 16 operational events to accelerate the transition of IW capability to the Fleet. -Solicited participation for TW 17 and recommended inclusion of technologies responsive to identified Naval Capability Gaps.					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3320 / *TRIDENT Warrior*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
-Provided subject matter expertise, analysis, and recommendations in order to help select technologies for participation in numbers supportable within resources. ***FY 2017 Plans:*** Trident Warrior (TW) was transferred from 0604231N to 0606355N from FY17 forward. ***FY 2018 Base Plans:*** N/A ***FY 2018 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	2.143	0.000	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

TW is an annual operational experiment covering an 18-month process and is not associated with acquisition efforts.

E. Performance Metrics

Confirmation of Fleet and Joint Interoperability with technology candidates, Information Assurance Certification and Accreditation, and alignment with United States Fleet Forces (USFF) Commander's Guidance, and Systems Command (SYSCOM) Chief Engineer (CHENG) as well as related Program Executive Office (PEO) objectives and projected architectures.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *Tactical Command System*	Project (Number/Name) 3323 / *Maritime Tactical Command & Control (MTC2)*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
3323: *Maritime Tactical Command & Control (MTC2)*	30.857	14.976	14.293	17.487	-	17.487	19.223	10.727	20.041	12.469	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Maritime Tactical Command and Control (MTC2) is the next generation C2 software program that will deliver Battle Management Aids (BMA) and Maritime Planning Tools (MPT) to dynamically plan, direct, monitor, and assess maritime operations in support of Joint, Multi-Service, Coalition Forces planning. MTC2 will leverage a System of Services (SoServ) to deliver capabilities improving decision speed and dynamic synchronization of forces. BMAs/MPTs are small, capability-focused deliveries that can be rapidly developed, tested, and fielded. MTC2 will leverage Science and Technology (S&T) investments and will engage with the Navy Requirements Governance Board to define and prioritize the BMAs and MPTs that MTC2 will be on deliver and align to the Program Executive Office (PEO) enterprise architecture (Consolidated Afloat Network Enterprise Service (CANES), Agile Core Services (ACS)) for fielding to all echelons of command (Afloat and Ashore) within the Navy. The program's objective is to provide a suite of maritime applications (BMAs/MPTs) that enable planning, execution, monitoring, and assessment in support of operational and tactical level of war requirements. MTC2 will field BMAs/MPTs designed to provide automated and structured support for tactical and operational planning, decision-making, and execution. As a software-only program that leverages enterprise infrastructure, MTC2 will provide new and improved capabilities to include an Operational Planning Tool (OPT), an improved browser enabled map visualization that will enable the warfighter to associate tracks to relevant data, past and predicted movements, ingest Meteorology and Oceanography information, and operational overlays. MTC2's updated architecture will enable future composable C2 capabilities to respond to a more rapid pace in changes in threats and technology. Global Force Management - Data Initiative (GFM-DI) is the Department-wide enterprise solution that enables visibility/accessibility/sharing of data applicable to the entire DoD force structure. MTC2 will incorporate distributed data transfer capability for enhanced operational data exchange between command and control systems, combat systems, logistics, and intelligence systems for timely threat identification, location, and status alongside blue force data. MTC2 will be the program that fulfills a portion of the Navy's GFM-DI requirements.

FY 2018 funding will provide prototype development, integration, and testing for two BMA/MPTs, OPT and Navy Wave on the MTC2 Secure Internet Protocol Router Network (SIPRNET) Development Environment. OPT will provide the capability for a Carrier Strike Group (CSG) to create operations plans/schedules (i.e., 96-hour plan). Navy Wave will provide collaborative service that allows users to see other distributed planner's edits in real-time, and works in disconnected, intermittent, and limited (DIL) environments. The MTC2 SIPRNET Development Environment will be available to the fleet to provide feedback on improvements to OPT and Navy Wave BMA/MPTs. MTC2 will update the existing Service Oriented Architecture (SOA) prototype at Commander, Pacific Fleet (COMPACFLT) and Commander, Sixth Fleet (COMSIXTHFLEET) in FY18. MTC2 project prototype baseline comprised of OPT and Navy Wave BMA/MPTs will be demonstrated at Trident Warrior (TW) 18. FY18 MTC2 will also conduct pre-Milestone B/Build Decision program and acquisition activities which includes updating all statutory and regulatory documentation to meet Milestone B/Build Decision requirements. Upon successful Milestone B/Build Decision, MTC2 will initiate transitioning prototype capabilities to a program of record and initiating program of record development, integration and test activities.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3323 / *Maritime Tactical Command & Control (MTC2)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Maritime Tactical Command and Control (MTC2)	13.131	12.860	17.487	0.000	17.487
Articles:	-	-	-	-	-
FY 2016 Accomplishments: Began pre-acquisition documentation in support of Milestone B in FY 2017. Completed Information Assurance (IA) certification and accreditation to support Navy Tactical Analytic Framework (NTAF) test event. Conducted testing in support of MTC2 NTAF risk reduction activities.					
FY 2017 Plans: Initiate Tactical Decision Aids and Planning Tools design and development. Begin development of MTC2 capabilities for Ballistic Missile Defense Tracks Situation Awareness and Aegis interfaces.					
FY 2018 Base Plans: Provide prototype development, integration, and testing for two Battle Management Aids (BMA) / Maritime Planning Tools (MPT), Operational Planning Tool (OPT), Navy Wave, and Distributed Data Transfer Service (DDTS) on the MTC2 Secure Internet Protocol Router Network (SIPRNET) Development Environment. Enable Fleet feedback for BMA/MPT improvement leveraging the MTC2 SIPRNET Development Environment. Field initial MTC2 project prototype baseline including OPT and Navy wave BMA/MPTs afloat. Update the existing Service Oriented Architecture (SOA) prototype at Commander, Pacific Fleet (COMPACFLT) and Commander, Sixth Fleet (COMSIXTHFLEET). Demonstrate MTC2 project prototype baseline including OPT and Navy Wave BMA/MPTs at Trident Warrior (TW) 18. Continue development to align to Program Executive Office (PEO) Command, Control, Communications, and Intelligence (C4I) enterprise architecture (Consolidated Afloat Networks and Enterprise Services (CANES) / Agile Core Services (ACS)). Conduct pre-Milestone B/ Build Decision program and acquisition activities including all statutory and regulatory documentation to meet Milestone B/Build Decision requirements. Hold a Milestone B/Build Decision and become a program of record. Continue integration and testing of designated GFM-DI capabilities for translation into the MTC2 prototype software baseline and begin integration and testing for fielding. Initiate transitioning prototype capabilities to a program of record and initiating program of record development, integration and test activities.					
FY 2018 OCO Plans: N/A					
Title: Global Force Management - Data Intiative (GFM-DI)	1.845	1.433	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2016 Accomplishments:					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3323 / *Maritime Tactical Command & Control (MTC2)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Conducted integration and testing of designated GFM-DI capabilities for translation into the MTC2 B1 software baseline. ***FY 2017 Plans:*** Continue integration and testing of designated GFM-DI capabilities for translation into the MTC2 B1 software baseline. ***FY 2018 Base Plans:*** Beginning in FY18, GFM-DI plans and accomplishments will be moving under the MTC2 Project and Program of Record. ***FY 2018 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	14.976	14.293	17.487	0.000	17.487

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

MTC2 acquisition strategy will align to DoDI 5000.02 Model 3 Incrementally Deployed Software Intensive Program. MTC2 will execute a rapid software development acquisition strategy that is responsive to the fleet needs. Instead of a single Milestone C, software development will be comprised of multiple builds defined by Capability Drops (CDs) of increasing levels of net-centric services capability, with separate Annual Build Decisions. MTC2 will remain in the Risk Reduction prototype phase until Milestone B scheduled in FY 2017. MTC2 will be software only requiring the information technology infrastructure network and hardware provided by other network centric programs. MTC2's primary contracting method for software development will utilize Space and Naval Warfare Systems Command (SPAWAR) contracts. SPAWAR Systems Center - Pacific (SSC-PAC), San Diego, CA will be the designated Software Support Activity (SSA).

E. Performance Metrics

MTC2 performance metrics will be defined and approved during Milestone B projected for FY 2018.

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *Tactical Command System*	Project (Number/Name) 3323 / *Maritime Tactical Command & Control (MTC2)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	SSC : San Diego, CA	5.074	1.618	Dec 2015	3.776	Dec 2016	4.095	Dec 2017	-		4.095	Continuing	Continuing	Continuing
Training Development	WR	SSC : San Diego, CA	1.252	0.543	Dec 2015	0.000		0.177	Dec 2017	-		0.177	Continuing	Continuing	Continuing
Integration, Assembly & Test	WR	SSC : San Diego, CA	13.929	7.146	Dec 2015	2.288	Dec 2016	0.000		-		0.000	0.000	23.363	23.363
Studies & Design	MIPR	Various : Various	1.764	0.000		0.000		0.000		-		0.000	0.000	1.764	1.764
Systems Engineering	C/CPFF	Various : Various	5.039	4.504	Jan 2016	2.132	Dec 2016	3.440	Dec 2017	-		3.440	Continuing	Continuing	Continuing
Software Development	C/CPIF	TBD : TBD	0.000	0.000		3.639	Jul 2017	0.000		-		0.000	Continuing	Continuing	Continuing
Software Development	WR	SSC : San Diego, CA	0.000	0.000		0.695	Dec 2016	8.543	Dec 2017	-		8.543	Continuing	Continuing	Continuing
		Subtotal	27.058	13.811		12.530		16.255		-		16.255	-	-	-

Remarks

The FY18 increase in funding supports the increase in software development and systems engineering efforts associated with prototype development and integration of Battle Management Aids (BMA) / Maritime Planning Tools (MPT), Operational Planning Tools (OPT), Navy Wave, and Distributed Data Transfer Service (DDTS).

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	SSC : Norfolk, VA/ San Diego, CA	0.047	0.000		0.127	Dec 2016	0.107	Dec 2017	-		0.107	Continuing	Continuing	Continuing
Integrated Logistics Support	C/CPFF	SeaPort : San Diego, CA	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	0.047	0.000		0.127		0.107		-		0.107	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	SSC : San Diego, CA	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
		Subtotal	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3323 / *Maritime Tactical Command & Control (MTC2)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	SSC : San Diego, CA	0.685	0.289	Dec 2015	0.000		0.000		-		0.000	0.000	0.974	0.974
Contractor Engineering Support	C/CPFF	SeaPort : San Diego, CA	0.476	0.000		0.225	Dec 2016	0.000		-		0.000	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	SeaPort : San Diego, CA	2.553	0.876	Dec 2015	0.855	Dec 2016	0.890	Dec 2017	-		0.890	Continuing	Continuing	Continuing
Program Management Support	WR	SSC : San Diego, CA	0.000	0.000		0.556	Dec 2016	0.235	Dec 2017	-		0.235	Continuing	Continuing	Continuing
Management Services	Various	Various : Various	0.038	0.000		0.000		0.000		-		0.000	0.000	0.038	-
		Subtotal	3.752	1.165		1.636		1.125		-		1.125	-	-	-

	Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	30.857	14.976		14.293		17.487		-		17.487	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3323 / *Maritime Tactical Command & Control (MTC2)*

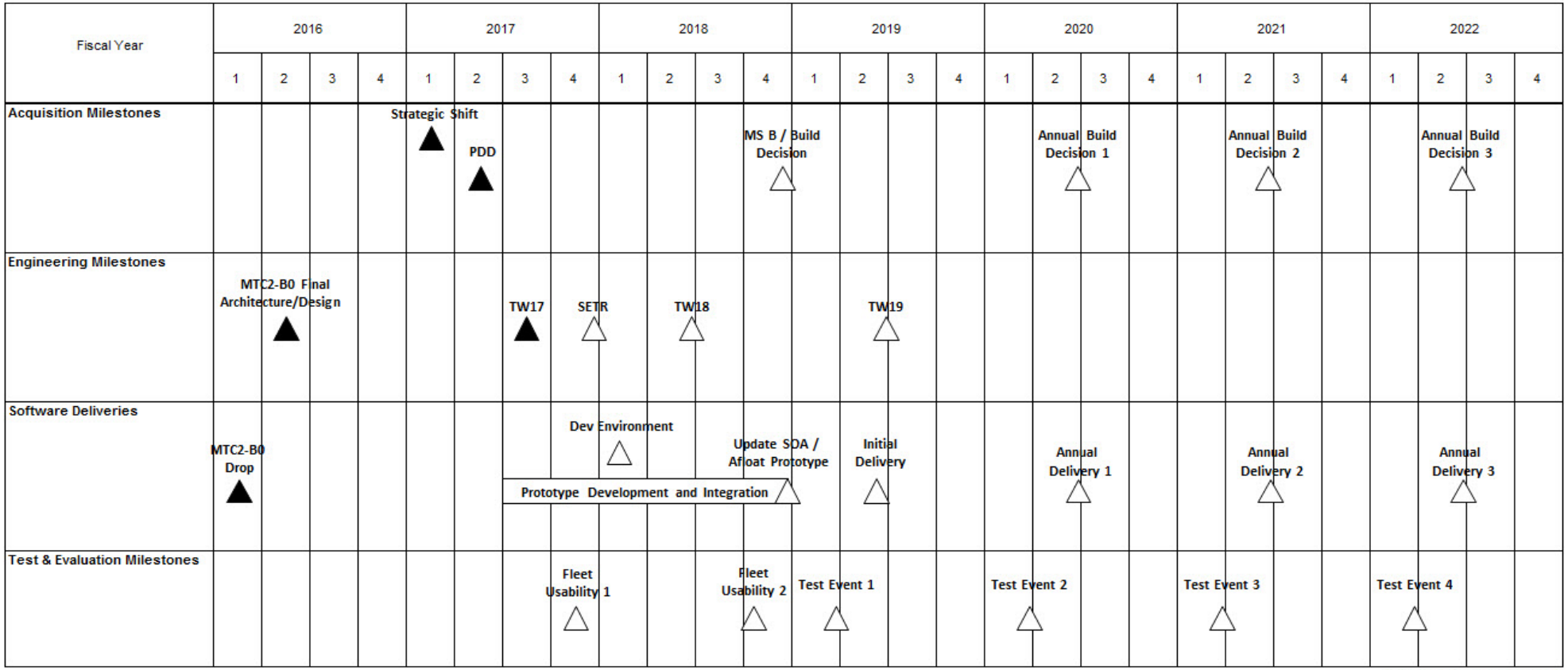

EXHIBIT R-4, Schedule Profile

Legend:

Dev - Development	PDD - Project Description Document
MS - Milestone	SETR - System Engineering Technical Review
MTC2 - Maritime Tactical Command and Control	SOA - Service Oriented Architecture
MTC2 B0 - Risk Reduction Software	TW - Trident Warrior

Exhibit R-4A, RDT&E Schedule Details: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3323 / *Maritime Tactical Command & Control (MTC2)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3323				
Program Strategic Shift Direction	1	2017	1	2017
Project Description Document (PDD)	2	2017	2	2017
Trident Warrior Fiscal Year 2017	3	2017	3	2017
Prototype Development and Integration	3	2017	4	2018
System Engineering Technical Review	4	2017	4	2017
Fleet Usability 1	4	2017	4	2017
Development Environment	1	2018	1	2018
Trident Warrior Fiscal Year 2018	2	2018	2	2018
Fleet Usability 2	4	2018	4	2018
Milestone B / Build Decision	4	2018	4	2018
Update Service Oriented Architecture (SOA) / Afloat Prototype	4	2018	4	2018
Test Event 1	1	2019	1	2019
Initial Delivery	2	2019	2	2019
Trident Warrior Fiscal Year 2019	2	2019	2	2019
Test Event 2	1	2020	1	2020
Annual Build Decision 1	2	2020	2	2020
Annual Delivery 1	2	2020	2	2020
Test Event 3	1	2021	1	2021
Annual Build Decision 2	2	2021	2	2021
Annual Delivery 2	2	2021	2	2021
Test Event 4	1	2022	1	2022

Exhibit R-4A, RDT&E Schedule Details: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3323 / *Maritime Tactical Command & Control (MTC2)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Annual Build Decision 3	2	2022	2	2022
Annual Delivery 3	2	2022	2	2022

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *Tactical Command System*	Project (Number/Name) 3324 / *Navy Air Operations Command and Control (NAOC2)*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
3324: *Navy Air Operations Command and Control (NAOC2)*	12.280	0.801	0.999	1.048	-	1.048	1.014	1.034	1.055	1.076	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Navy Air Operations Command and Control (NAOC2) integrates and tests Air Force program of record systems that provide an integrated and scalable planning system for standardized, secure, and automated decision support for Air Force, Joint, and Allied commanders worldwide. These programs provide automated air operations planning, execution management and intelligence capabilities at the Force level to include fleet commanders, numbered fleet commanders, Commander Carrier Strike Groups, Commander Expeditionary Strike Groups, Commander Landing Forces, and Joint Task Force Commanders. NAOC2 includes Theater Battle Management Core System (TBMCS) and Command and Control Air Operations Suite - Command and Control Information Services (C2AOS-C2IS). C2AOS-C2IS is being developed as a Service Oriented Architecture (SOA) service to allow for scalability and integration with Common Computing Environments (CCE). Continuation of these efforts will significantly enhance the Joint Force Air Component Commander and Combined Air Operations Center personnel to plan daily air operations including strike, airlift, offensive/defensive air, and refueling missions in support of combat operations, addressing the requirement of war fighter distributed planning and execution processes along with significantly improving Joint interoperability. TBMCS continues a hardware transition to CCEs such as Consolidated Afloat Networks and Enterprise Services (CANES). Currently, TBMCS is the key system that is used to conduct real world air planning in the Joint and Navy environments. C2AOS-C2IS will replace TBMCS in a SOA environment while bringing more flexibility to the war fighter. In FY 2018, the program will continue Navy integration and testing for Air Force developed C2AOS-C2IS, with focus on testing of three planned Capability Packages.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Command and Control Air and Space Operations Suite - Command and Control Information Services (C2AOS-C2IS) Integration and Testing	0.801	0.999	1.048	0.000	1.048
Articles:	-	-	-	-	-
FY 2016 Accomplishments: Conducted final integration and Developmental Test, and Operational Test of initial C2AOS-C2IS modules to include Capability Package 1 (CP1) Air Tasking Order Management System (ATOMS), CP1 Request Information Services for Command and Control (RISC2), Capability Package 2 (CP2) Airspace Management Application/ Airspace Information Service (ASMA/ASIS), and CP2 Integrated Air and Missile Defense (IAMD) Planner.					
FY 2017 Plans: Begin integration and testing of Capability Package 3 (CP3) Air eXecution Information Systems (AXIS) and Air Status (AirSTAT), and begin integration and validation of the consolidated CP1/CP2/CP3 capabilities					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3324 / *Navy Air Operations Command and Control (NAOC2)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
to confirm full functionality on Navy infrastructure to include Consolidated Afloat Networks and Enterprise Services (CANES), ensuring increased Joint interoperability and enhanced capability including theater level air planning with distributed re-planning and execution processes. ***FY 2018 Base Plans:*** Continue integration and testing of Capability Package 1 (CP1)/Capability Package 2 (CP2)/Capability Package 3 (CP3) Request Information Services for Command and Control (RISC2) & Airspace Management Application/ Airspace Information Service (ASMA/ASIS), CP1/CP2 Integrated Air and Missile Defense (IAMD) Planner & Air Tasking Order Management System (ATOMS), CP3 Air eXecution Information Systems (AXIS), and CP3 Air Status (AirSTAT). Continue integration and validation of the consolidated CP1/CP2/CP3 capabilities to confirm full functionality on Navy infrastructure to include CANES, ensuring increased Joint interoperability and enhanced capability including theater level air planning with distributed re-planning and execution processes. Conduct Developmental Test and Ashore Operational Test of initial C2AOS-C2IS modules to include CP1 ATOMS, CP1 RISC2, CP2 ASMA/ASIS, CP2 IAMD Planner, CP3 AXIS, and CP3 AirSTAT. ***FY 2018 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	0.801	0.999	1.048	0.000	1.048

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Theater Battle Management Core System (TBMCS) and Command and Control Air Operations Suite - Command and Control Information Services (C2AOS-C2IS) are designed, developed, and delivered by the Air Force and will be integrated for a Navy Common Computing Environment (CCE) such as CANES. As a Joint interest program, this approach satisfies the current validated requirements, supports the accelerated retirement of legacy hardware, and reduces overall risk to the program.

E. Performance Metrics

TBMCS and C2AOS-C2IS are designed, developed, and delivered by the Air Force. This leverage greatly reduces the integration and testing costs associated with each capability module. The solutions will reside on CCE/CANES architecture. These software-only solutions eliminate hardware procurement, installation, and reduce sustainment costs.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *Tactical Command System*	Project (Number/Name) 3425 / *Digital Warfare Office (DWO) MBE&DT Development*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
3425: *Digital Warfare Office (DWO) MBE&DT Development*	0.000	0.000	0.000	5.950	-	5.950	8.150	9.500	10.800	10.800	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Digital Warfare Office (DWO) was transferred from Proj 9123 to Proj 3425 in FY18 and out.

A. Mission Description and Budget Item Justification

The Chief of Naval Operations concurred with the Task Force Netted Navy recommendation to stand up the Digital Warfare Office (DWO) to set requirements, prioritize resources, and lead efforts on information interoperability and human/machine teaming.

NAVAIR, NAVSEA, SPAWAR, associated Program Executive Offices, warfare and system centers and University Affiliated Research Centers/Federally Funded Research and Development Centers will support the Model Based Engineering, Technical Design, and Requirements branches in the new DWO under OPNAV N2N6. In order to develop capability from the top down, the DWO will develop requirements for the system of systems to include all of the associated interoperability requirements. Due to the complexity of this work, the DWO will evolve the traditional requirements development methodology to a model based systems engineering environment that will include associated model extensions, reports, views, configuration management, help desk support, and documentation. This work will be completed by a series of teams, each focused on a separate threat domain, and made up of system modelers, fleet representatives, program of record representatives, architecture and interoperability experts, etc. The products generated by these teams will include data technical baselines for domain areas with individual profiles for each program of record, coordinated requirements recommendations, and potential areas for S&T and experimentation to fill gaps. The DWO will also explore emerging digital technologies including human/machine teaming.

Each SYSCOM will be involved in creating Data Technical Baseline (DTB) profiles specific for each program of record. DTBs may consist of interfaces, protocols, content, information quality, architectural aspects, and knowledge base frameworks. SYSCOMs will exercise technical authority to assess Program of Record compliance to DTBs and Key Performance Parameters in support of gate reviews and system engineering technical reviews.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Digital Warfare Office (DWO) Model Based Systems Engineering (MBSE)	0.000	0.000	5.950	0.000	5.950
Articles:	-	-	-	-	-
FY 2016 Accomplishments: N/A					
FY 2017 Plans:					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3425 / *Digital Warfare Office (DWO) MBE&DT Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
DWO was previously funded under PE 0604231N Proj 9123. ***FY 2018 Base Plans:*** -Perform MBE assessments on Programs of Record (PoRs) and develop models of the relevant Data Technical Baselines (DTBs). -Establish and implement required extensions to model requirements trace and reports that will be used in the Joint Capabilities Integration and Development System (JCIDS) process. -Validate current standards across the Systems Commands (SYSCOMs) to help form the overarching Navy DTB in order to facilitate tailoring of each standard for the PoR DTB. -Verify and validate different SYSCOM architectures and guidance to produce a Navy-wide high level architectural framework. -Develop functional baseline architecture of Navy capabilities that maps back to mission threads. -Configure the distributed MBE and data science environment for remote accessibility over a given network enclave, including but not limited to Non-Secure Internet Protocol Router (NIPR), Secure Internet Protocol Router (SIPR), and Joint Worldwide Intelligence Communications System (JWICS). -Integrate cyber requirements across all Digital Warfare Office (DWO) architecture and standard efforts and verify cyber requirements are captured as part of the modeling process. ***FY 2018 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	0.000	0.000	5.950	0.000	5.950

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

DWO is a non-acquisition effort that informs and matures Navy decisions, which in turn impacts acquisition programs.

E. Performance Metrics

DWO Performance Metrics: Goal: Assist Chief of Naval Operations (CNO) by setting requirements, prioritizing resources, and lead efforts on information interoperability and human/machine testing. Metric: Echelon 1 development of requirements associated with modeling, data science experimentation environment, and digital architectures.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 3425 / *Digital Warfare Office (DWO) MBE&DT Development*

The Digital Warfare Office will set requirements, prioritize resources, and lead efforts on information interoperability and human/machine teaming. This will result in a workforce that is trained in new systems engineering and modeling concepts and tools. It will also result in development of a requirements modeling environment to include associated model extensions, reports, views, and configuration management and in the development of digital technical baselines for programs to use to ensure cross-domain interoperability.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *Tactical Command System*	Project (Number/Name) 9123 / *FORCEnet*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
9123: *FORCEnet*	234.690	2.284	6.177	2.399	-	2.399	2.233	2.276	2.323	2.368	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

FY 2017 amended request includes $4.000 million to establish the approved Digital Warfare Office (DWO). Funding supports development of requirements modeling and data science experimentation environment, mission area Model-Based Engineering (MBE) teams, development of digital technical baselines, development of digital architectures, and the development of workforce training in Model-Based Systems Engineering (MBSE).

DWO transferred to Project 3425 in FY18 and out.

A. Mission Description and Budget Item Justification

FORCEnet is the Navy and Marine Corps initiative to deliver Information Warfare (IW) and achieve Department of the Navy (DoN)/Department of Defense (DoD) Transformation, Joint/Allied/Coalition Interoperability, implementing Maritime Domain Awareness (MDA), and Net-Centric Operations/Warfare (NCO/W). Chief of Naval Operations (CNO) IW effort focuses prioritization and organizational responsibility for IW, cyber, intelligence and sensors resulting in increased scope of systems, platforms and mission areas. FORCEnet is a foundation of Sea Power 21, Naval Power 21, which is the Naval Operating Concept (NOC) for Joint Operations, and the DoN's Naval Transformation Roadmap.

The FORCEnet project line funds the following efforts:

(1) IW Portfolio Health Assessment (PHA): Funding supports PHAs of Navy mission areas and identifies gaps in IW capabilities in the context of assessed mission areas. Funds support vignettes, technical baselines, architecture products, and briefings developed to support sponsor decision making processes.

(2) The Chief of Naval Operations concurred with the Task Force Netted Navy recommendation to stand up the Digital Warfare Office (DWO) to set requirements, prioritize resources, and lead efforts on information interoperability and human/machine teaming.

NAVAIR, NAVSEA, SPAWAR, associated Program Executive Offices, warfare and system centers and University Affiliated Research Centers/Federally Funded Research and Development Centers will support the Model Based Engineering, Technical Design, and Requirements branches in the new DWO under OPNAV N2N6. In order to develop capability from the top down, the DWO will develop requirements for the system of systems to include all of the associated interoperability requirements. Due to the complexity of this work, the DWO will evolve the traditional requirements development methodology to a model based systems engineering environment that will include associated model extensions, reports, views, configuration management, help desk support, and documentation. This work will be completed by a series of teams, each focused on a separate threat domain, and made up of system modelers, fleet representatives, program of record representatives, architecture and interoperability experts, etc. The products generated by these teams will include data technical baselines for domain areas with individual profiles for each program of record, coordinated requirements recommendations, and potential areas for S&T and experimentation to fill gaps. The DWO will also explore emerging digital technologies including human/machine teaming.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 9123 / *FORCEnet*

Each SYSCOM will be involved in creating Data Technical Baseline (DTB) profiles specific for each program of record. DTBs may consist of interfaces, protocols, content, information quality, architectural aspects, and knowledge base frameworks. SYSCOMs will exercise technical authority to assess Program of Record compliance to DTBs and Key Performance Parameters in support of gate reviews and system engineering technical reviews.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: FORCEnet	2.284	6.177	2.399	0.000	2.399
Articles:	-	-	-	-	-
FY 2016 Accomplishments: -Utilized and studied Navy mission areas in support of System of Systems (SoS) engineering assessments used to inform sponsor. These assessments identified integration and interoperability gaps, trades, and solutions for sponsor related equities. -Provided analytical support which ensured that cybersecurity risk assessments and engineering activities were informed by Navy Cybersecurity Situational Awareness (NCSA) capabilities as addressed by the PHA. Identified critical architectural dependencies that enabled mission situational awareness, which was a key component of the PHAs. -Continued to identify Navy mission area gaps in Information Warfare (IW) capabilities and also prioritized Science and Technology (S&T) efforts for future budget decisions. -Continued to assess tradespace and solutions, ensured Force level capability and systems of systems integration and interoperability in studied mission areas. -Continued to package assessments to support sponsor decision-making processes.					
FY 2017 Plans: -Continue to utilize and study Navy mission areas in support of System of Systems (SoS) engineering assessments used to inform sponsor. These assessments identify integration and interoperability gaps, trades, and solutions for sponsor related equities. -Continue to provide analytical support to ensure that cybersecurity risk assessments and engineering activities are informed by Navy Cybersecurity Situational Awareness (NCSA) capabilities as addressed by the Portfolio Health Assessment (PHA). Continue to identify critical architectural dependencies that enable mission situational awareness, which is a key component of the PHAs. -Continue to identify Navy mission area gaps in IW capabilities to prioritize S&T efforts for future budget decisions. -Continue to assess tradespace and solutions, ensuring Force level capability and SoS integration and interoperability in studied mission areas. -Continue to package assessments to support sponsor decision-making processes.					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Additional FY 2017 funding supports the following: Digital Warfare Office (DWO): Perform Model-Based Engineering (MBE) assessments on Programs of Record (PoRs) and develop models of the relevant Data Technical Baselines (DTBs). -Establish and implement required extensions to model requirements trace and reports that will be used in the Joint Capabilities Integration and Development System (JCIDS) process. -Validate current standards across the System Commands (SYSCOMs) to help form the overarching Navy DTB in order to facilitate tailoring of each standard for the PoR DTB. -Verify and validate different SYSCOM architectures and guidance to produce a Navy-wide high level architectural framework. ***FY 2018 Base Plans:*** -Expand upon SoS mission engineering analyses and ongoing experimentation to iteratively mature the findings and outcomes, while increasing the support to a development of a Limited Operational Capability (LOC). -Continue to provide analytical support to ensure that cybersecurity risk assessments and engineering activities are informed by NCSA capabilities as addressed by the PHA. -Continue to utilize and study Navy mission areas in support of systems of systems engineering assessments used to inform sponsor. These assessments identify integration and interoperability gaps, trades, and solutions for sponsor related equities. -Continue to identify Navy mission area gaps in Information Warfare (IW) capabilities to prioritize Science and Technology (S&T) efforts for future budget decisions. Continue to identify critical architectural dependencies that enable mission situational awareness, which is a key component of the Portfolio Health Assessments (PHAs). -Continue to assess tradespace and solutions, ensuring Force level capability and System of Systems (SoS) integration and interoperability in studied mission areas. -Continue to package assessments to support sponsor decision-making processes. ***FY 2018 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	2.284	6.177	2.399	0.000	2.399

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *Tactical Command System*	**Project (Number/Name)** 9123 / *FORCEnet*

D. Acquisition Strategy

FORCEnet is a non-acquisition effort that informs and matures Navy decisions, which in turn impacts acquisition programs. Activities include acquiring intellectual capital in emerging technical areas through contracts providing technical engineering expertise and surge capacity for emerging tasks.

E. Performance Metrics

FORCEnet Performance Metrics: Goal: Chief of Naval Operations (CNO) strategic planning and supporting acquisition of classified efforts. Metric: Echelon 1 response to emergent strategic needs and classified warfighting capability.