Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Navy											Date: April 2022	
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 COMMAND AND CONTROL*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	510.858	117.688	122.913	143.575	-	143.575	92.652	84.531	79.230	72.373	Continuing	Continuing
0486: *Tactical Support Center*	148.433	5.762	5.536	6.060	-	6.060	5.984	12.555	14.761	12.468	Continuing	Continuing
2343: *Tactical METOC Applications*	11.709	11.547	11.520	12.976	-	12.976	12.903	12.627	12.804	12.879	Continuing	Continuing
2345: *Fleet METOC Equipment*	0.142	2.448	0.562	0.498	-	0.498	2.414	1.411	0.502	0.513	Continuing	Continuing
2363: *Remote Sensing Capability Development*	5.433	7.056	4.442	4.745	-	4.745	4.797	4.696	4.772	4.856	Continuing	Continuing
3050: *Deployable JT Command and Control*	2.817	2.911	2.579	3.840	-	3.840	3.770	3.523	3.575	3.631	Continuing	Continuing
3260: *Naval Operations Business Logistics Enterprise (NOBLE)*	79.728	84.506	95.339	112.479	-	112.479	62.023	48.946	42.027	37.221	Continuing	Continuing
3323: *Maritime Tactical Command & Control (MTC2)*	0.000	0.820	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.820
3324: *Navy Air Operations Command and Control (NAOC2)*	16.534	0.497	0.717	0.740	-	0.740	0.761	0.773	0.789	0.805	Continuing	Continuing
9123: *FORCEnet*	246.062	2.141	2.218	2.237	-	2.237	0.000	0.000	0.000	0.000	0.000	252.658

Note

Project Unit 3323: FY2021 control is due to Maritime Tactical Command & Control (MTC2) transitioning into the Software and Digital Technology Pilot Program under the new Budget Activity 08, and designated as a new start in FY2021, the program currently has funding executed out of both their old Program Element (PE) (0604231N) and their new PE (0608321N). The program had to execute funding out of the old PE during the FY2021 Continuing Resolution (CR) and working with the Defense Finance and Accounting Service (DFAS) to transfer all expenditures from the old PE 0604321N to the new PE 0608321N.

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.

Programs will implement digital system-of-systems engineering by using tools such as Model Based System Engineering (MBSE) and Digital Twins to create adaptable digital models to optimize system engineering from design, development and testing to operations and sustainment. Programs will use Development, Security and

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Operations (DevSecOps) processes for continuous development, integration, testing and deployment, along with common platform services such as Agile Core Services (ACS), for faster fielding of capability. Overall program development efforts include the investigation of emerging technologies through study, development and associated testing for feasibility of program insertion.

(Proj 0486) Tactical Support Center: The Tactical Mobile program provides agile 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 mission planning and 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, antisubmarine warfare, mining, search and rescue, indications and warning, realtime full motion video collection and streaming/ dissemination, and special operations. The missions are supported by Tactical Operations Centers, Mobile Tactical Operations Centers, and Fly Away Kits.

(Proj 2343,2345,2363) Tactical METOC Applications; Fleet METOC Equipment, and Remote Sensing Capability Development (RSCD): The Air/Ocean Equipment Engineering (AOEE) projects provide new capabilities to support naval combat forces. This program engineers and developmentally tests organic and remote sensors, communication interfaces, and processing and display devices. This equipment is engineered to measure, ingest, store, process, distribute and display conditions of the physical environment that are essential to the optimum employment and performance of naval warfare systems. AOEE also engineers capabilities for shipboard and shore-based tactical systems. A major area of focus for the AOEE program is to provide the engineering development of specialized equipment and measurement capabilities that are intended to monitor specific conditions of the physical environment in hostile and remote areas in response to fleet demand signals for increased sensing capability and capacity to support battlespace collections and prediction on short to intermediate time scales. With such capabilities, the war fighters' situational awareness of the operational effects of the physical environment are made more certain. Efforts include investigation of emerging technologies through study, development, and associated testing for feasibility of program insertion. Major emphasis areas include the Naval Integrated Tactical Environmental System Next Generation (NITES-Next) project (2343), Littoral Battlespace Sensors - Unmanned Undersea Vehicles (LBS-UUV) and the Environmental Satellite Receiver Processor (ESRP) project (2345), and the Remote Sensing Capability Development (RSCD) project (2363).

(Proj 3050) Deployable Joint Command and Control (DJC2) provides a self-contained, standardized, rapidly deployable, modular, scalable, and reconfigurable joint command and control (C2) capability to designated Geographic Combatant Commands (GCCs). DJC2 is the materiel solution to Defense Planning Guidance that called for the development of standing Joint Task Forces (JTFs) with a deployable C2 capability. DJC2 will ensure that Joint Force Commanders (JFC) are equipped, as well as trained and organized, to carry out their C2 responsibilities. DJC2 provides GCCs and JFCs a mission critical, integrated family of systems with which to plan, control, coordinate, execute, and assess operations. It is designed to deploy rapidly, set up within hours, and quickly provide necessary C2 mission and collaboration functionality across the full spectrum of JTF operations. The DJC2 has also been deployed in support of Humanitarian Assistance and Disaster Relief (HA/DR) efforts. The capability is intended for all levels of conflict and will be reconfigurable to meet specific GCC and JTF mission requirements. This capability is interoperable with higher and adjacent echelons of command (to include coalition allies) as well as with supporting elements to include joint forces.

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(Proj 3260) Naval Operational Business Logistics Enterprise (NOBLE) is the logistics information technology family of systems comprised of the Naval Operational Supply System (NOSS), the Naval Maintenance, Repair, and Overhaul (N-MRO), and supporting capabilities to include a common platform hosting environment and data exchange solutions.

NOBLE enables combat lethality by generating and sustaining Navy and Marine Corps force readiness for operational commanders afloat and ashore, providing the foundational capability to keep ships driving, planes flying, and weapons firing from an equipment Operational Availability (Ao) perspective.

NOBLE is the centerpiece of the Fleet's strategic imperative to improve Sailor, unit and group maintenance self-sufficiency combat operations in a communications and access-denied arena.

NOBLE's mission is to provide the Navy and Marine Corps with an integrated, scalable, and cybersecure capability that supports the management of logistical information, material, and funds required to maintain and operate ships, submarines, and aircraft.

The NOBLE FoS (Family of Systems) will provide direct support to warfighter readiness with maintenance, supply, and financial capabilities. 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.

The NOBLE architecture will meet current and emerging demands for cyber security, enable Financial Improvement and Audit Readiness (FIAR), drive efficiency into Navy logistics and aviation and maritime maintenance mission requirements, and eliminate over 700 application/database servers. NOBLE FoS will deploy to the Consolidated Afloat Networks and Enterprise Services (CANES) afloat, Department of the Navy (DON) commercial cloud computing environments ashore, and US Marine Corps operating environments.

(Proj 3324) 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 Kessel Run Applications Kit for Enterprise Navy (KRAKEN). KRAKEN aligns with the Compile to Combat (C2C24) construct in providing Rapid, agile delivery of capabilities to the fleet by commercial cloud infrastructure using Development, Security, Operations (DevSecOps) cloud native applications. KRAKEN is comprised of multiple tactical software applications that will provide continuous iterate delivery of software to shipboard and shore users. It will also align with the Joint C2 Reference Architecture (JC2RA) such as Consolidated Afloat Networks and Enterprise Services (CANES). KRAKEN is not natively compatible with Navy Information Technology (IT) infrastructure, such as CANES, and requires a significant level of system integration. Continuation of Navy integration and test efforts will significantly enhance the ability of the Joint Force Air Component Commander and Combined Air Operations Center personnel to plan daily air operations including strike, airlift, offensive/defensive air, missile defense, and refueling missions in support of combat operations. Developmental Testing is continuous and operates in parallel with the DevSecOps construct. KRAKEN will be continued for new technology insertion into Navy infrastructure network

and hardware in support of Naval Air C2 and Net Enabled Weapons system integration. KRAKEN addresses the requirement of war fighter distributed planning and execution processes along with significantly improving Joint interoperability. TBMCS continues a hardware transition to CANES. Currently, TBMCS is the key system that is used to conduct real world air planning in the Joint and Navy environments. KRAKEN will replace TBMCS while bringing more flexibility to the war fighter.

(Proj 9123) FORCEnet: The mission of this effort is to support Portfolio Health Assessments (PHA). PHA analyzes the Navy's Information Warfare portfolio by focusing on the total capability to support Navy missions rather than on individual program health. PHA looks at more than the Naval Tactical Grid/Information Warfare (NTG/IW) portion of the "Killchain". PHA uses Mission Engineering Architecture, M&S, and Analysis techniques to integrate the sensors, platforms, weapons, and operators into the NTG/IW architecture to ensure that the Navy delivers to mission level capability.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	124.780	122.913	0.000	-	0.000
Current President's Budget	117.688	122.913	143.575	-	143.575
Total Adjustments	-7.092	0.000	143.575	-	143.575
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.237	0.000			
• SBIR/STTR Transfer	-4.855	0.000			
• Program Adjustments	0.000	0.000	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000
• Adjustments to Budget Year	-	-	143.575	-	143.575

Change Summary Explanation

FY2023 funding request was reduced by .547 million to account for the availability of prior year execution balances.

Technical: Not applicable.

SCHEDULE:

Tactical Support Center (Project 0486): NAVAIR is designing and developing an interim P-8A Increment 3 ground station (PGS) that leverages TacMobile Inc 2.1 communications infrastructure at fixed site Tactical Operations Centers (TOC). This PGS instantiation meets a subset of the TacMobile requirements

TacMobile Inc 3 leverages the PGS architecture with the focus on increased mobility (Size, Weight, Power and Cooling (SWaP-C)) for the Mobile Tactical Operations Centers (MTOC) to meet the complete Tacmobile Inc 3 requirements.

The PGS partial solution will be recapitalized where feasible and incorporated into the full TacMobile Increment 3 design solution. Leveraging PGS will require some TacMobile redesign to achieve a smaller, lightweight, scalable Network-centric Services Oriented Architecture (SOA) configuration.

FY2023 funding will complete TacMobile Increment 3 Critical Design Review (CDR) activities and commence initial System Integration Testing (SIT) in preparation for FY25 Capability Package 1 (CP-1) Developmental Testing (DT), and Capability Package 2 (CP-2) Operational Assessment in FY 27.

Naval Operational Business Logistics Enterprise (NOBLE) (Project 3260): The schedule changes are due to the ASN(RDA) ADM of Aug 30 2021 which directed changes to the NOSS and N-MRO acquisition strategy, fielding plan, and architecture. An updated NOSS and N-MRO acquisition strategy to include supporting capabilities (i.e. a common hosting platform for enhanced cyber security and speed to fielding and data exchange solution).

FUNDING:

Fleet METOC Equipment (Project 2345): FY 2023 funding request was reduced by $.064 to account for the availability of prior year execution balances.

Tactical METOC Applications (Project 2343): NITES-Next increase of $1.456 from FY 2022 to FY 2023 will increase software development efforts to support cloud infrastructure and operational capabilities identified by the Fleet and defined by stakeholders through quarterly capability prioritization meetings.

Naval Operational Business Logistics Enterprise (NOBLE) (Project 3260):
Investment required to complete NOSS Other Transaction Authority (OTA) Limited Deployment (LD) Build 1 integration, testing, training, site installation activities, data migration and validation activities, Government IV&V and Functional Managers Certification (FMC), and perform operational testing (i.e. User Acceptance Testing (UAT)) in FY23. Investment required to complete OTA LD Build 2 prototyping and configuration of Commercial Off The Shelf (COTS) capabilities in preparation for integration, testing, training, site installation activities, data migration and validation activities, and plan/preparation for the combined NOSS and NMRO Limited Deployment (LD) 1 and 2 Government IV&V in support of FMC, and UAT efforts targeted for Fiscal Year 2024. Investment supports attainment of multiple Authorizations to Operate (ATOs), software licensing, site installation activities, data migration and validation, training development, testing and deployment of NOSS capabilities.

Naval Maintenance, Repair, and Overhaul (N-MRO): Funding realigned from NAMS and NOME starting in FY21. Investment required to complete N-MRO Other Transaction Authority (OTA) Limited Deployment (LD) Build 1 integration, testing, training, site installation activities, data migration and validation activities, Government IV&V and Functional Managers Certification (FMC), and perform User Acceptance Testing (UAT) in FY23. Investment required to complete delivery of the common platform hosting environment and data exchange solution to support the integration of Logistics IT systems and applications within the Consolidated Afloat Network Enterprise Services (CANES), the DON commercial cloud ashore, and the US Marine Corps operating environments.

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Investment required to complete OTA LD Build 2 prototyping and configuration of Commercial Off The Shelf (COTS) capabilities in preparation for integration, testing, training, site installation activities, data migration and validation activities, and plan/preparation for the combined NOSS and NMRO Limited Deployment (LD) 1 and 2 Government IV&V in support of FMC, and UAT efforts targeted for Fiscal Year 2024. Investment supports attainment of multiple Authorizations to Operate (ATOs), software licensing, site installation activities, data migration and validation, training development, testing and deployment of N-MRO.

Increase in funding profile from FY22 to FY23 due to FY22 negotiated N-MRO licensing costs, and inclusion of licensing and delivery of the common platform hosting environment solution to support the combined N-MRO and NOSS Limited Deployments 1 and 2 venues for Fiscal Year 2024.

Navy Air Operations Command and Control (Project 3324): FY23 increase is driven by inflation.

FORCEnet (Project 9123): Decrease of $2.218M between FY22 and FY23 is attributed to a NAVAL Information Warfare and Architecture vertical reduction, eliminating funding beginning in FY23.

FY 2023 funding increase reflects the fact that the FY 2022 President’s Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
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COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
0486: *Tactical Support Center*	148.433	5.762	5.536	6.060	-	6.060	5.984	12.555	14.761	12.468	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

TacMobile is the Ground Station that 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 that provides Command, Control, Communications, Computers, and Intelligence (C4I) for Navy's 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 (FAK) 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.

The TacMobile program uses an evolutionary development strategy consisting of incremental upgrades to meet new and emergent Fleet requirements, while retaining current capabilities. Increments are planned and resourced to support the MPRF Family of Systems aircraft: P-8A Poseidon aircraft and its upgrades; Advanced Airborne Sensor (AAS); and MQ-4C Triton.

FY23: Funding will complete TacMobile Increment 3 Critical Design Review (CDR) activities and commence initial System Integration Testing (SIT) in preparation for FY25 Capability Package 1 (CP-1) Developmental Testing (DT), and Capability Package 2 (CP-2) Operational Assessment in FY 27. TacMobile Inc 3 leverages the P-8A Ground Station (PGS)
architecture with the focus on increased mobility (Size, Weight, Power and Cooling (SWaP-C)) for the Mobile Tactical Operations Centers (MTOC) to meet the complete TacMobile Inc 3 requirements. The PGS partial solution will be recapitalized where feasible and incorporated into the full TacMobile Increment 3 design solution. Leveraging PGS will require some TacMobile redesign to achieve a smaller, lightweight, scalable Network-centric Services Oriented Architecture (SOA) configuration.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: TacMobile Increment 3.0	5.762	5.536	6.060	0.000	6.060

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Articles:	-	-	-	-	-
FY 2022 Plans: INTEROPERABILITY: Conduct Preliminary Design Review Delta PDR incorporating and leveraging appropriate influences from PMA290 P-8 Ground Station (PGS) architecture and design decisions; Continue TacMobile Increment 3 Design, working towards an FY24 Engineering Assessment review, FY24-26 SECRET enclave Developmental Testing, and ultimately an FY26 Critical Design Review - (Inc 3.0); SYSTEM UPGRADES: Incorporate fleet and engineering change requests into Inc 3 design - (Inc 3.0); Implement hardware upgrades to address obsolescence and technological changes that do not impact system capability, investigate emerging technologies through study, development, and associated testing for feasibility of program insertion - (Inc 3.0); MODERNIZATION: Implement Size Weight Power and Cooling (SWaP-C) reductions into final Engineering Development Model (EDM) design and proposed TOC/MTOC design - (Inc 3.0)					
FY 2023 Base Plans: INTEROPERABILITY: Complete Critical Design Review for TacMobile Inc 3 architecture, that incorporates and leverages appropriate influences from PMA290 P-8 Ground Station (PGS) architecture and design decisions; Commence System Integration, and conduct begin Systems Integration Testing (SIT) in preparation for an FY25 Capability Package 1 (CP-1) Developmental Test (DT), and laying the groundwork for the Capability Package 2 (CP-2) Operational Assessment in FY 27. TacMobile Inc 3 Systems Integration includes TacMobile redesign of the P-8A Ground Station to achieve a smaller, lightweight, scalable Network-centric Services Oriented Architecture (SOA) configuration, implementing increased mobility to achieve TacMobile Increment 3 requirements for Mobile Tactical Operations Centers (MTOC) Size, Weight, Power and Cooling (SWaP-C).					
FY 2023 OCO Plans: N/A					
FY 2022 to FY 2023 Increase/Decrease Statement: FY23 minor funding increase for TacMobile Increment 3 development is due to increased facilities and labor costs associated with Design of Top Secret (TS) Sensitive Compartmented Information (SCI) enclaves.					
Accomplishments/Planned Programs Subtotals	5.762	5.536	6.060	0.000	6.060

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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• OPN/2906: *TacMobile*	20.493	16.868	24.030	-	24.030	27.851	38.468	40.713	33.497	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evolutionary Acquisition - TacMobile is the ground station program of record that supports the P-8A Poseidon and MQ-4C Triton pre- and post-flight C4I requirements and Inflight Command and Control support. These ground stations provide critical reach-back capabilities between the airborne platforms and the Maritime Intelligence Surveillance and Reconnaissance (ISR) Enterprise/ decision makers. TacMobile consists of fixed-site Tactical Operations Centers (TOCs), Mobile TOCs (MTOCs), and Fly Away Kits (FAKs). TacMobile is comprised of 23 subsystems that utilize an evolutionary development strategy consisting of incremental upgrades synchronized to match increased P-8A capabilities, while retaining current functionality and readiness. TacMobile Increment 3 will incorporate support for P-8A Poseidon Increment 3 ECP 6/7 and other Maritime Patrol and Reconnaissance Force (MPRF) Family of Systems (FoS) aircraft systems, as they transition to a DEVSECOPS Architecture.

TacMobile Increment 3 will be developed and fielded in a series of capability package upgrades. Capability Package One (CP-1) will field a GENSER SECRET Technical Refresh to TacMobile Increment 2.1 as a risk reduction toward Increment 3. Capability Package 2 (CP-2) will incorporate and field GENSER SECRET and TOP SECRET Increment 3 capabilities to fully support the P-8A Increment 3 ECP 6/7 aircraft.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPFF	NIWC LANT; SRC; Charleston, SC; Pax River, MD : Charleston; SC; Pax River, MD	16.288	1.463	Dec 2020	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Systems Engineering	C/CPFF	NIWC LANT; SRC; Charleston, SC; Pax River, MD : Charleston, SC; Pax River, MD; San Diego, CA	39.032	1.756	Dec 2020	3.070	Dec 2021	3.594	Dec 2022	-		3.594	Continuing	Continuing	Continuing
Training Development	C/CPFF	NIWC LANT; SRC; Charleston, SC; Pax River, MD : Charleston, SC; Pax River, MD; San Diego, CA	3.461	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Software Development	C/CPFF	NIWC LANT; SRC; Charleston, SC; Pax River, MD : Charleston, SC; Pax River, MD; San Diego, CA	51.300	1.066	Dec 2020	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Integrated Logistics Support	C/CPFF	NIWC LANT; SRC; Charleston, SC; Pax River, MD : Charleston, SC; Pax River, MD	1.805	0.035	Dec 2020	0.043	Dec 2021	0.043	Dec 2022	-		0.043	Continuing	Continuing	Continuing
Configuration Management	C/CPFF	NIWC LANT; SRC; Charleston, SC; Pax River, MD : Charleston, SC; Pax River, MD	1.417	0.023	Dec 2020	0.044	Dec 2021	0.044	Dec 2022	-		0.044	Continuing	Continuing	Continuing
Technical Data	C/CPFF	NIWC LANT; SRC; Charleston, SC; Pax River, MD :	2.233	0.251	Dec 2020	1.629	Dec 2021	1.629	Dec 2022	-		1.629	Continuing	Continuing	Continuing

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Charleston, SC; Pax River, MD													
Studies & Analyses	C/CPFF	NIWC LANT; SRC; Charleston, SC; Pax River, MD : Pax River, MD; San Diego CA	1.070	0.015	Dec 2020	0.400	Dec 2021	0.400	Dec 2022	-		0.400	Continuing	Continuing	Continuing
		Subtotal	116.606	4.609		5.186		5.710		-		5.710	Continuing	Continuing	N/A

Remarks

FY23 funding increase in Systems engineering reflects commencement of Systems Integration, and Systems integration testing.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	C/CPIF	NIWC LANT; SRC; Charleston, SC; Pax River, MD : Charleston, SC; Pax River, MD	4.490	0.803	Dec 2020	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Operational Test & Evaluation	MIPR	OPTEVFOR; NIWC LANT; SRC : Jacksonville, FL;Patuxent River MD	6.020	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	10.510	0.803		0.000		0.000		-		0.000	Continuing	Continuing	N/A

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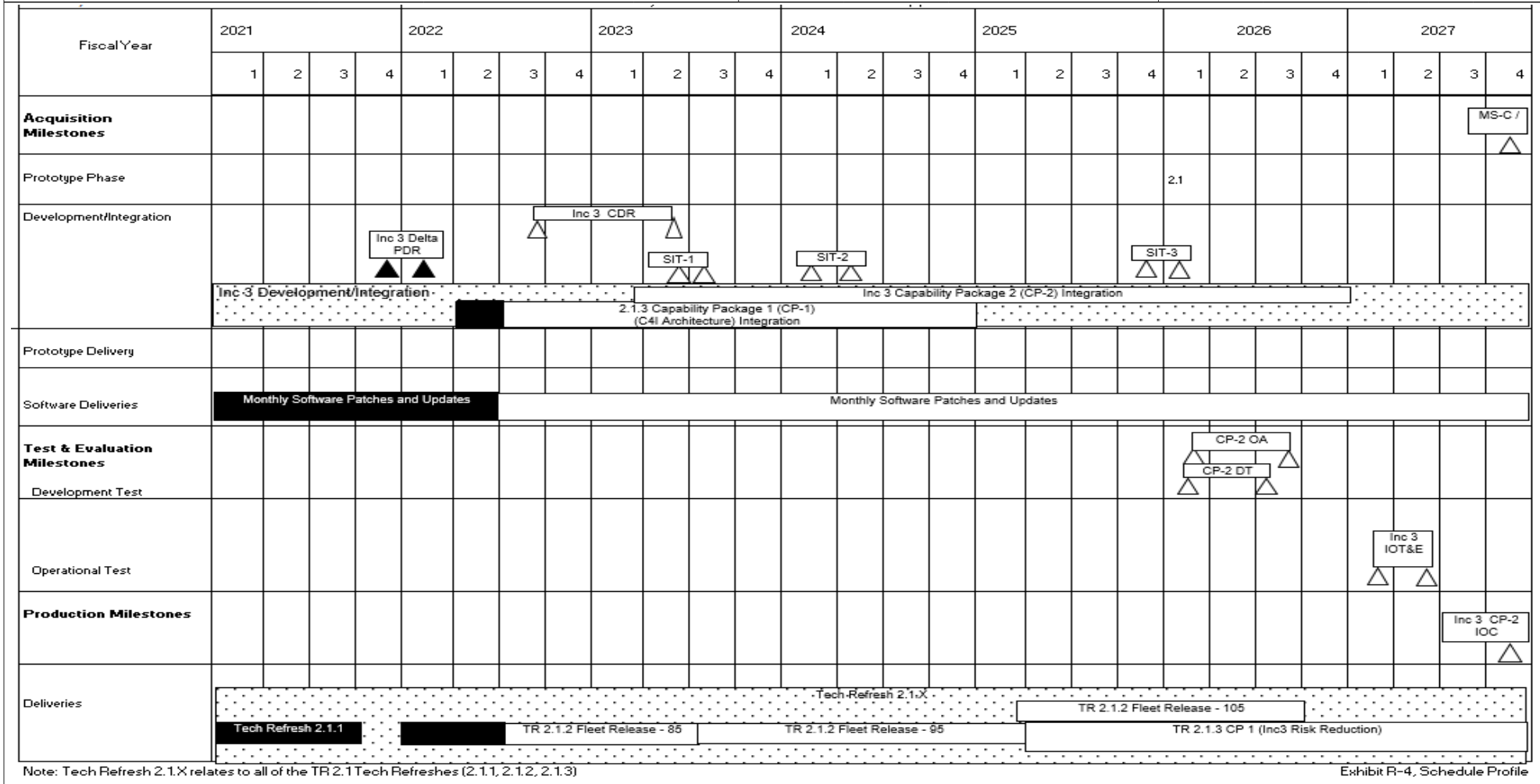
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPIF	SRC; BAH; Deloitt : Charleston, SC; Pax River, MD; San Diego, CA	4.005	0.195	Dec 2020	0.195	Dec 2021	0.195	Dec 2022	-		0.195	Continuing	Continuing	Continuing
Government Engineering Support	WR	NIWC LANT : Charleston, SC; Pax River, MD	2.648	0.107	Dec 2020	0.107	Dec 2021	0.107	Dec 2022	-		0.107	Continuing	Continuing	Continuing
Program Management Support	C/CPIF	NIWC PAC;PMW 750; SRC; BAH; Deloitte : Charleston, SC; San Diego, CA	14.307	0.023	Dec 2020	0.023	Dec 2021	0.023	Dec 2022	-		0.023	Continuing	Continuing	Continuing
Travel	WR	PMW750 : San Diego, CA	0.357	0.025	Dec 2020	0.025	Dec 2021	0.025	Dec 2022	-		0.025	Continuing	Continuing	Continuing
		Subtotal	21.317	0.350		0.350		0.350		-		0.350	Continuing	Continuing	N/A

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	148.433	5.762		5.536		6.060		-		6.060	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 0486 / *Tactical Support Center*



Note: Tech Refresh 2.1.X relates to all of the TR 2.1 Tech Refreshes (2.1.1, 2.1.2, 2.1.3)

Exhibit R-4, Schedule Profile

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 0486 / *Tactical Support Center*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0486				
Inc 2.1.X Software Patch Delivery (Monthly)	1	2021	4	2027
Tech Refresh Delivery (TR 2.1.1)	1	2021	3	2021
Tech Refresh Delivery (TR 2.1.2)	1	2022	3	2026
Preliminary Design Review (Increment 3)	4	2021	4	2021
Critical Design Review (Increment 3)	3	2022	2	2023
Development/Integration (Increment 3)	1	2021	4	2027
Developmental Test (Increment 3) (CP-2)	1	2026	3	2026
Systems Integration Test (CP-1) SIT 1	2	2023	3	2023
Systems Integration Test (CP-1) SIT 2	1	2024	2	2024
Operational Assessment (Increment 3) (CP-2)	1	2026	3	2026
IOT&E Inc 3	1	2027	2	2027
MS-C	4	2027	4	2027
IOC CP 2	4	2027	4	2027
Developmental Test (CP-2)	1	2026	3	2026
Systems Integration Test (CP-2) SIT 3	4	2025	1	2026
TR 2.1.2 Fleet Release 85	1	2022	3	2023
TR 2.1.2 Fleet Release 95	3	2023	1	2025
TR 2.1.2 Fleet Release 105	2	2025	3	2026
Tech Refresh 2.1.3 CP 1 (Inc 3 Risk Reduction)	2	2025	4	2027
2.1.3 Capability Package (CP-1) Integration	2	2022	4	2024
Inc 3 Capability Package (CP-2) Integration	2	2023	4	2026

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 2343 / *Tactical METOC Applications*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
2343: *Tactical METOC Applications*	11.709	11.547	11.520	12.976	-	12.976	12.903	12.627	12.804	12.879	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Tactical Meteorology and Oceanography (METOC) Applications Project provides cyber secure operational effects decision aid capabilities for Navy and Marine Corps warfighters in the context of Joint Operations in a net-centric environment. This project funds the agile software development of the Naval Integrated Tactical Environmental System - Next Generation (NITES-Next) program of record. The NITES-Next program identifies and transitions state-of-the-art decision support software technologies from the government and commercial industry's technology base, and then demonstrates and validates these capabilities before fielding. These software decision support tools provide platform, sensor, communications, and weapon systems performance assessments for warfighters in terms of their littoral and deep-strike battlespace environments. These assessments allow mission planners and warfighters, from Unit to Theater level, to optimize their sensor employment on airborne, surface, and subsurface platforms in support of Naval Composite Warfare mission areas including Undersea Warfare (USW), Anti-Submarine Warfare (ASW), Mine Warfare (MIW), Amphibious Warfare (AMW), Anti-Surface Warfare (ASUW), Anti-Air Warfare (AAW), Strike Warfare (STW), Expeditionary Warfare (EXW), Electronic Warfare (EW), Information Operations (IO), Intelligence Operations (INT), Non-Combat Operations (NCO), Command, Control, Communication (CCC), and Naval Special Warfare (NSW). Performance assessments leading to improvements in operational and tactical control are conducted through a two-tiered approach: 1) METOC Decision Aids and, 2) Operational Effects Decision Aids (OEDAs). METOC Decision Aids consist of a series of analysis tools which characterize the physical environment conditions of the battlespace based on the best set of physical environment data available at the time (i.e., some combination of historical and/or real-time (or near real-time) in-situ, and numerically modeled forecast data). OEDAs use the METOC Decision Aid information by fusing it with relevant, often-classified, sensor and target data to predict how weapons and sensor systems will perform. Performance results are displayed in tabular and graphic formats integrated into net-centric visualization tools for use by mission planners, and combat/weapon system operators to develop localization plans, USW/AAW/ASUW screens, STW profiles, and AMW ingress and egress points. METOC Decision Aids and OEDAs use data obtained through direct interfaces to Navy combat systems. Cyber secure capabilities are a current emphasis required to characterize and/or predict sensor and weapons system performance in the highly complex littoral environments in support of regional conflict scenarios. It addresses multi-warfare areas, particularly shallow water ASW, NSW, and missile and air defense/strike capabilities.

Funding supports development and integration efforts for METOC systems to generate and collect METOC data and fuse multiple intelligence inputs to more robustly characterize and predict tactical atmospheric and oceanographic conditions. This integrated METOC picture will support real-time battlespace awareness of propagation conditions affecting signals across the electromagnetic spectrum. METOC data will be fused with other intelligence data and automatically provided to shipboard combat systems to inform kinetic and non-kinetic fires.

FY23 funding is for NITES-Next to to deliver capabilities to provide Electo-Optical Sensor Performance Prediction, Surfzone forecasting, and littoral current characterization. The program will continue planning for the future development efforts and contracting activities. The program will continue to maintain and update its Risk Management Framework (RMF) Authorities to Operate (ATO).

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2343 / *Tactical METOC Applications*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Naval Integrated Tactical Environmental System - Next Generation (NITES-Next)	11.547	11.520	12.976	0.000	12.976
Articles:	-	-	-	-	-
FY 2022 Plans: - NITES-Next Build Decisions, Field Decisions and Fleet Capability Releases (i.e., FCR-4 & FCR-5) transition to Adaptive Acquisition Framework, Software Acquisition Pathway through an ongoing Development capability area. - Engage the Requirements Governance Board (RGB) to align with operational Fleet user requests. - Continue planning for RGB requirements through future iterative software development, annual acquisition strategy updates, and continuous engineering reviews. - Manage RMF ATOs and participate in multiple Consolidated Afloat Networks and Enterprise Services (CANES) Application Integration (AI) System Integration Test (SIT) events throughout the FY. The program is migrating to the Adaptive Acquisition Framework, Software Acquisition pathway and these activities are in alignment with that pathway.					
FY 2023 Base Plans: - Continue to support transition to Adaptive Acquisition Framework, Software Acquisition Pathway by delivering software releases at least annually, but more frequently over time through an ongoing software development process. - Engage external stakeholders through quarterly capability prioritization meetings to align with operational Fleet user needs and requests. - Continue planning for requirements through iterative software development, annual acquisition strategy reviews, and continuous engineering reviews. - Continue development capability efforts and releases will focus on cloud infrastructure, the JWICS enclave, data ordering refactor, littoral characterization, and/or capabilities deemed emergent by stakeholders. - Continue to manage RMF ATOs and participate in multiple Consolidated Afloat Networks and Enterprise Services (CANES) Application Integration (AI) System Integration Test (SIT) events throughout the FY.					
FY 2023 OCO Plans: N/A					
FY 2022 to FY 2023 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2343 / *Tactical METOC Applications*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Increase of $1.456 from FY 2022 to FY 2023 is driven by software development efforts to support cloud infrastructure and operational capabilities identified by the Fleet and defined by stakeholders.					
Accomplishments/Planned Programs Subtotals	11.547	11.520	12.976	0.000	12.976

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• OPN/4226: *Meteorological Equipment*	15.192	13.687	15.175	-	15.175	16.601	14.955	14.258	14.539	Continuing	Continuing

Remarks

D. Acquisition Strategy

The NITES-Next program acquisition, management and contracting strategies are to support the Tactical Meteorology & Oceanography (METOC) Applications project to continue the development of state-of-the-art software capabilities that provide sensor, communication, and weapon system performance assessment capabilities for open ocean and littoral operating environments. The Department of the Navy (DoN) maintains management oversight of the NITES-Next program's acquisition and contracting strategies.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 2343 / *Tactical METOC Applications*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NITES-Next Software Development	WR	NIWC Pacific : San Diego, CA	2.761	2.434	Nov 2020	2.428	Nov 2021	2.841	Nov 2022	-		2.841	Continuing	Continuing	Continuing
NITES-Next Software Development	C/FP	SAIC : Virginia	2.063	2.246	Jan 2021	2.241	Jan 2022	2.487	Jan 2023	-		2.487	Continuing	Continuing	Continuing
NITES-Next Software Development	WR	NIWC Atlantic : South Carolina	0.094	0.094	Oct 2020	0.094	Oct 2021	0.160	Oct 2022	-		0.160	Continuing	Continuing	Continuing
NITES-Next Software Development	C/IDIQ	Various : Various	4.559	4.433	May 2021	4.422	May 2022	4.951	May 2023	-		4.951	Continuing	Continuing	Continuing
		Subtotal	9.477	9.207		9.185		10.439		-		10.439	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NITES-Next Architecture	C/FP	SAIC : Virginia	1.253	1.358	Jan 2021	1.355	Jan 2022	1.503	Jan 2023	-		1.503	Continuing	Continuing	Continuing
		Subtotal	1.253	1.358		1.355		1.503		-		1.503	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NITES-Next Government Technical Oversight	WR	NIWC PAC : San Diego, CA	0.398	0.401	Nov 2020	0.400	Nov 2021	0.444	Nov 2022	-		0.444	Continuing	Continuing	Continuing
NITES-Next Program Management	C/FP	BAH : San Diego CA	0.581	0.581	Jan 2021	0.580	Jan 2022	0.590	Jan 2023	-		0.590	Continuing	Continuing	Continuing
		Subtotal	0.979	0.982		0.980		1.034		-		1.034	Continuing	Continuing	N/A

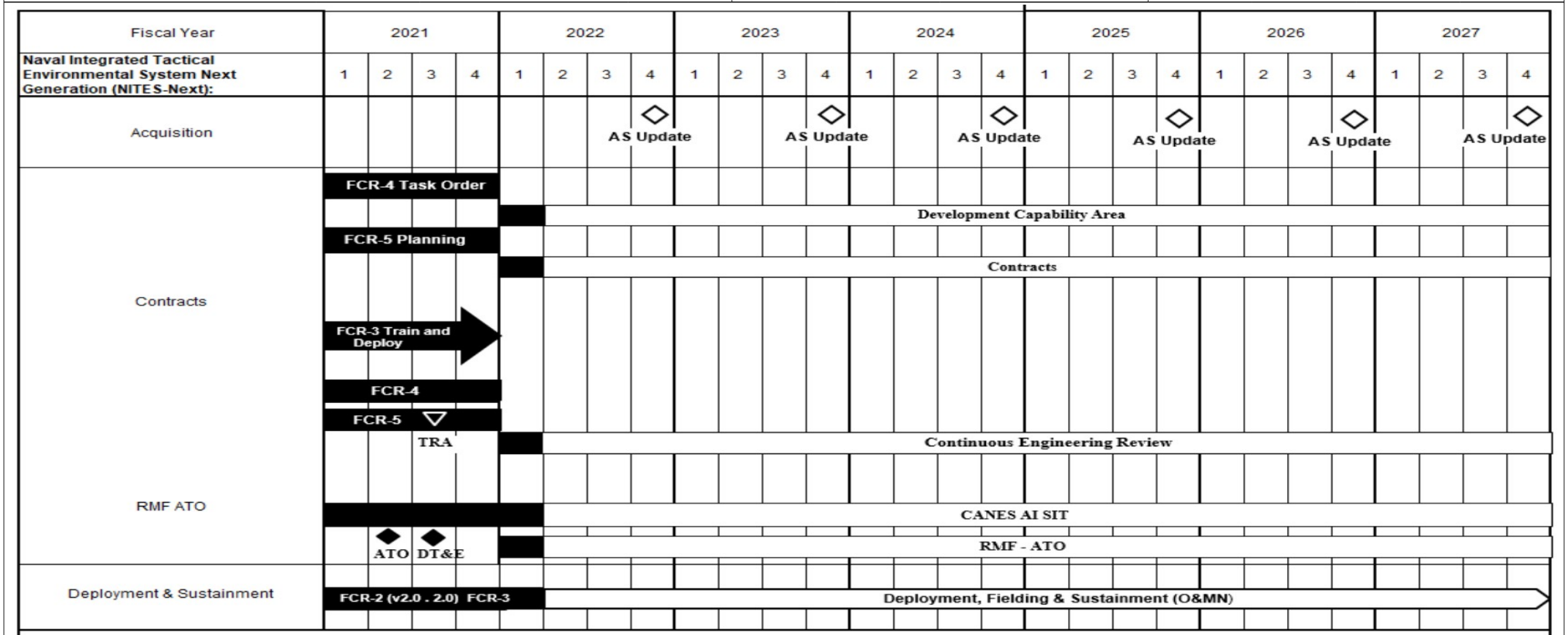
	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	11.709	11.547		11.520		12.976		-		12.976	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 2343 / *Tactical METOC Applications*	

	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2343 / *Tactical METOC Applications*



Acronyms: AS = Acquisition Strategy. FCR = Fleet Capability Release. ATO = Authority to Operate. DT&E = Developmental Test & Evaluation. CANES = Consolidated Afloat Networks and Enterprise Services. SIT = System Integration Test. AI = Application Integration. RMF = Risk Management Framework.

Notes: NITES-Next schedule is updated to reflect moving away from Build Decisions, Field Decisions and Fleet Capability Releases and to an Acquisition Strategy Annual Update.

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2343 / *Tactical METOC Applications*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Naval Integrated Tactical Environmental System - Next Generation (NITES-Next)				
Acquisition: Acquisition Strategy Update 1	4	2022	4	2022
Acquisition: Acquisition Strategy Update 2	4	2023	4	2023
Acquisition: Acquisition Strategy Update 3	4	2024	4	2024
Acquisition: Acquisition Strategy Update 4	4	2025	4	2025
Acquisition: Acquisition Strategy Update 5	4	2026	4	2026
Acquisition: Acquisition Strategy Update 6	4	2027	4	2027
Contracts: FCR-4 Task Order	1	2021	4	2021
Contracts: Development Capability Area	1	2022	4	2027
Contracts: FCR-5 Planning	1	2021	4	2021
Contracts: Contracts	1	2022	4	2027
Contracts: Fleet Capability Release - 3 / Train and Deploy	1	2021	4	2021
Contracts: Fleet Capability Release - 4	1	2021	4	2021
Contracts: Fleet Capability Release - 5	1	2021	4	2021
Contracts: Technology Readiness Assessment - 5	3	2021	3	2021
Contracts: Continuous Engineering Review	1	2022	4	2027
RMF ATO: Authority to Operate FCR-4	2	2021	2	2021
RMF ATO: Developmental Test Fleet Capability Release - FCR-4	3	2021	3	2021
RMF ATO: CANES AI SIT	1	2021	4	2027
RMF ATO: RMF - ATO	1	2022	4	2027
RMF ATO: Deployment and Sustainment: Deployment, fielding and Sustainment (OMN)	1	2021	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 2345 / *Fleet METOC Equipment*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
2345: *Fleet METOC Equipment*	0.142	2.448	0.562	0.498	-	0.498	2.414	1.411	0.502	0.513	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Littoral Battlespace Sensing - Unmanned Undersea Vehicles (LBS-UUV) project provides for the engineering and manufacturing development of sensors, communication interfaces, processing and display meteorological and oceanographic (METOC) equipment. This equipment is designed to provide future mission capabilities for war fighters to measure, ingest, store, process, distribute and display METOC parameters and derived products.

This project also exploits new government off-the-shelf/commercial off-the-shelf technologies, tactical sensors and web enablement for the Navy's computer-based tactical shipboard and shore capability used to predict and assess the operational effects of the physical environment on the performance of platforms, weapons and sensor systems. This project includes development of warfare specific mission planning modules to support unmanned systems with integration of data from environmental and tactical sensor systems, model forecast information and Geospatial Information & Services Databases. This project also supports development of autonomous environmental sensing systems for situational awareness and tactical decision aid/mission planner support, as well as iridium and advanced satellite communication integration in METOC sensor, vehicle control and mission planning systems that will be required to achieve Chief of Naval Operations (CNO) objectives for information dominance and decision superiority.

Major emphasis areas include Littoral Battlespace Sensing - Unmanned Undersea Vehicles (LBS-UUV) and the Environmental Satellite Receiver Processor (ESRP) program (comprised of ESRP AFLOAT (formerly AN/SMQ-11) and ESRP ASHORE (formerly AN/FMQ-17) systems).

FY23 funding for the Littoral Battlespace Sensing - Gliders (LBS-G) and LBS - Autonomous Undersea Vehicles (LBS-AUV) will focus on engineering design studies. Efforts will develop system upgrades via Engineering Change Proposals (ECP's) and correct any identified software and/or hardware deficiencies. Continue investigating potential capability improvements, such as, but not limited to, endurance (e.g. battery technology), autonomy (precise navigation with obstacle avoidance), communications (at depth), and advanced sensors (Conductivity Temperature Depth (CTD), optical clarity).

FY23 funding for Environmental Satellite Receiver Processor (ESRP) continues integration of ESRP systems in support of WSF-M, EWS-G, GOES-15, GOES-16, GOES-17 and EUMETSAT satellites, and ensure systems continue to receive enhanced METOC data and imagery as satellite systems evolve. FY23 request will also support development of modernized ESRP Afloat system.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Littoral Battlespace Sensing - Unmanned Undersea Vehicle (LBS-UUV)	0.192	0.186	0.086	0.000	0.086
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2345 / *Fleet METOC Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
FY 2022 Plans: - Continue engineering design studies for the Littoral Battlespace Sensing - Gliders (LBS-G) and Littoral Battlespace Sensors - Autonomous Undersea Vehicles (LBS-AUV). - Develop system upgrades via Engineering Change Proposals (ECP's) and correct any identified software and/or hardware deficiencies. - Continue investigating potential capability improvements, such as, but not limited to, endurance (e.g. battery technology, bio-fouling), autonomy (precise navigation with obstacle avoidance), communications (comms at depth), and advanced sensors (CTD, optical clarity). ***FY 2023 Base Plans:*** - Continue engineering design studies for the Littoral Battlespace Sensing - Gliders (LBS-G) and Littoral Battlespace Sensors - Autonomous Undersea Vehicles (LBS-AUV). - Develop system upgrades via Engineering Change Proposals (ECP's) and correct any identified software and/or hardware deficiencies. - Continue investigating potential capability improvements, such as, but not limited to, endurance (e.g. battery technology, bio-fouling), autonomy (precise navigation with obstacle avoidance), communications (comms at depth), and advanced sensors (CTD, optical clarity). ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease of $0.1M from FY2022 to FY2023 will reduce the amount of engineering design studies and Engineering Change Proposals (ECP's).					
Title: Environmental Satellite Receiver Processor (ESRP)	2.256	0.376	0.412	0.000	0.412
Articles:	-	-	-	-	-
FY 2022 Plans: - Continue integration of ESRP systems in support of WSF-M, EWS-G, GOES-15, GOES-16, GOES-17 and EUMETSAT satellites. - Select a viable modernization Course of Action (COA) and continue development of modernized ESRP Afloat prototype ***FY 2023 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2345 / *Fleet METOC Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
- Continue integration of ESRP systems in support of WSF-M, EWS-G, GOES-15, GOES-16, GOES-17 and EUMETSAT satellites. - Demonstrate ESRP Afloat modernization prototype for commercial Satellite Communication (SATCOM) integration, test, and deploy. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase of $0.036M from FY 2022 to FY 2023 is in support of the demonstration and prototype efforts required for the new ESRP afloat terminal/system.					
Accomplishments/Planned Programs Subtotals	2.448	0.562	0.498	0.000	0.498

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• OPN/4226: *Meteorological Equipment*	15.192	13.687	15.175	-	15.175	16.601	14.955	14.258	14.539	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Littoral Battlespace Sensing - Unmanned Undersea Vehicles (LBS-UUV) acquisition strategy is to develop and engineer equipment to acquire Meteorological and Oceanographic (METOC) data in order to improve the accuracy of global and regional scale METOC forecast models.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2345 / *Fleet METOC Equipment*

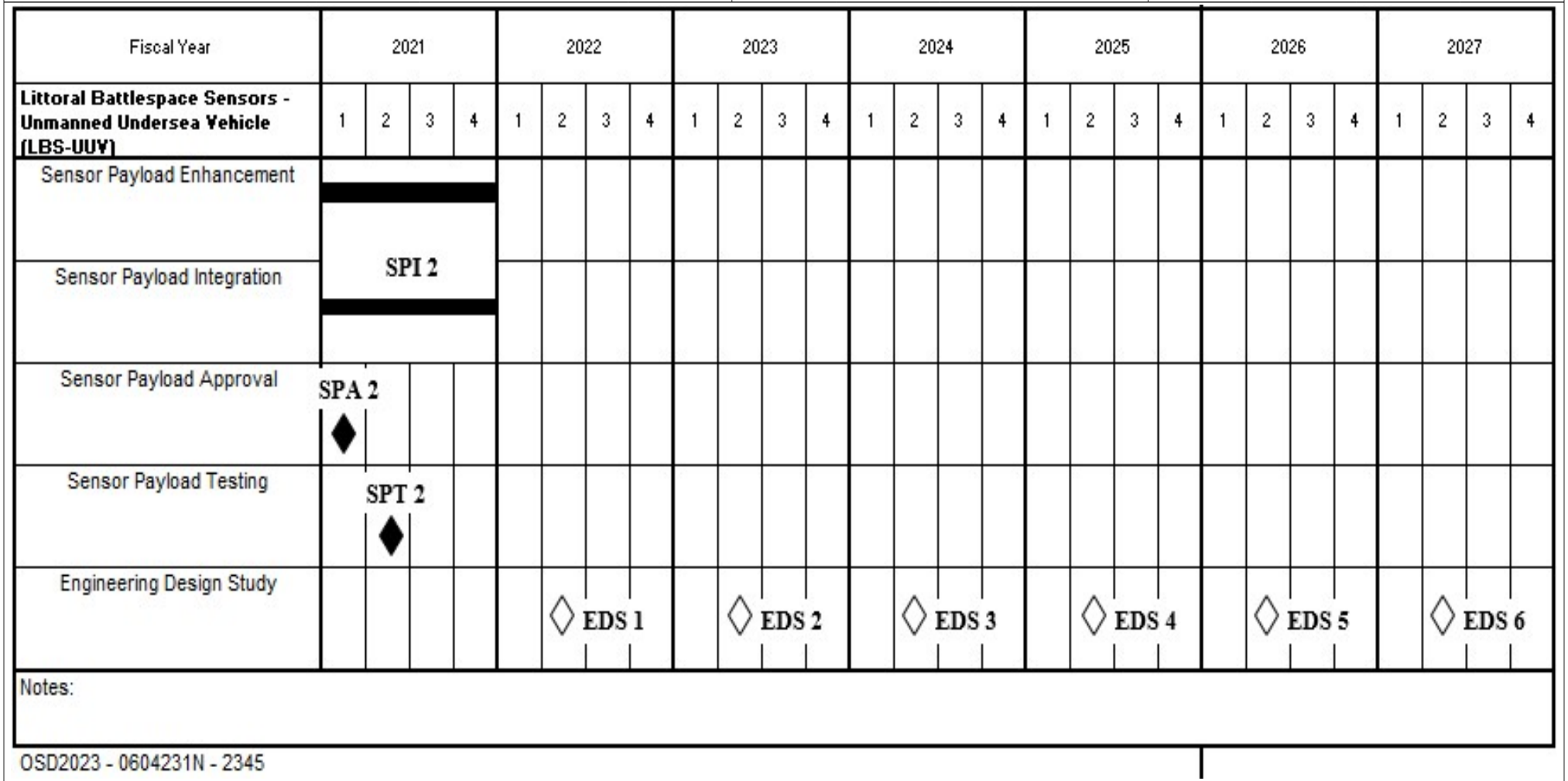
Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Environmental Satellite Receiver Processor (ESRP) - Development	SS/CPFF	Raytheon : Indianapolis	0.142	0.556	Feb 2021	0.376	Feb 2022	0.362	Mar 2023	-		0.362	Continuing	Continuing	Continuing
Littoral Battlespace Sensing - Gliders Development	Various	Teledyne Brown : Alabama	0.000	0.096	Jul 2021	0.093	Mar 2022	0.043	Mar 2023	-		0.043	Continuing	Continuing	Continuing
Littoral Battlespace Sensing - Autonomous Undersea Vehicle Development	Various	Hydroid : Pocasset, MA	0.000	0.096	Jul 2021	0.093	Mar 2022	0.043	Mar 2023	-		0.043	Continuing	Continuing	Continuing
Environmental Satellite Receiver Processor (ESRP) - Development	Various	The Mitre Corporation : Mc Lean Virginia	0.000	0.300	Jan 2021	0.000		0.000		-		0.000	0.000	0.300	-
Environmental Satellite Receiver Processor (ESRP) - Development	Various	NIWC Pacific : San Diego, Ca	0.000	1.400	Jun 2021	0.000		0.050	Mar 2023	-		0.050	Continuing	Continuing	Continuing
		Subtotal	0.142	2.448		0.562		0.498		-		0.498	Continuing	Continuing	N/A

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.142	2.448		0.562		0.498		-		0.498	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2345 / *Fleet METOC Equipment*



Notes:

OSD2023 - 0604231N - 2345

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 2345 / *Fleet METOC Equipment*	

Fiscal Year	2021				2022				2023				2024				2025				2026				2027			
Environmental Satellite Receiver Processor (ESRP)	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
ESRP Sensors in View Development																												
ESRP Sensors in View Integration																												
ESRP Satellite Testing	SAT TEST ♦				SAT TEST ♦				SAT TEST ◇				SAT TEST ◇				SAT TEST ◇				SAT TEST ◇				SAT TEST ◇			
ESRP Next Generation Development																												

Notes:

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2345 / *Fleet METOC Equipment*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Littoral Battlespace Sensors - Unmanned Undersea Vehicle (LBS-UUV)				
Sensor Payload Enhancement:	1	2021	4	2021
Sensor Payload Integration: Sensor Payload Integration2	1	2021	4	2021
Sensor Payload Approval: Sensor Payload Approval 2	1	2021	1	2021
Sensor Payload Testing: Sensor Payload Testing 2	2	2021	2	2021
Engineering Design Study: Engineering Design Study 1	2	2022	2	2022
Engineering Design Study: Engineering Design Study 2	2	2023	2	2023
Engineering Design Study: Engineering Design Study 3	2	2024	2	2024
Engineering Design Study: Engineering Design Study 4	2	2025	2	2025
Engineering Design Study: Engineering Design Study 5	2	2026	2	2026
Engineering Design Study: Engineering Design Study 6	2	2027	2	2027
Environmental Satellite Receiver Processor (ESRP)				
ESRP Sensors in View Development: ESRP Sensors in View Development	1	2021	4	2027
ESRP Sensors in View Integration: ESRP Sensors in View Integration	1	2021	4	2027
ESRP Satellite Testing: ESRP Satellite Testing (FY21)	2	2021	2	2021
ESRP Satellite Testing: ESRP Satellite Testing (FY22)	2	2022	2	2022
ESRP Satellite Testing: ESRP Satellite Testing (FY23)	2	2023	2	2023
ESRP Satellite Testing: ESRP Satellite Testing (FY24)	2	2024	2	2024
ESRP Satellite Testing: ESRP Satellite Testing (FY25)	2	2025	2	2025
ESRP Satellite Testing: ESRP Satellite Testing (FY26)	2	2026	2	2026
ESRP Next Generation Development: ESRP Next Generation Development	1	2021	4	2025

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 2363 / *Remote Sensing Capability Development*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
2363: *Remote Sensing Capability Development*	5.433	7.056	4.442	4.745	-	4.745	4.797	4.696	4.772	4.856	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Remote Sensing Capabilities Development (RSCD) project integrates and fields capabilities to enhance maritime domain awareness using non-organic sensors under the Top Secret / Sensitive Compartmented Information (TS/SCI) SEAHORSE process. The system addresses Fleet Integrated Prioritized Capability List (IPCL) and capabilities gaps for increasing Battlespace Awareness and Intelligence Surveillance and Reconnaissance (ISR) capabilities to support Fleet Tasking, Collections, Processing, Exploitation, and Dissemination (TCPED) processes. RSCD employs automation concepts to produce intelligence with significantly less Fleet manpower than traditional processes. The project is also working to shorten and streamline the SEAHORSE TCPED cycle to meet speed of service and accuracy requirements. RSCD incorporates state of the art software in the form of machine/continuous learning technologies to achieve a significant reduction of false alarm rates. SEAHORSE is relied upon by INDOPACOM, CENTCOM, and EUCOM to provide intelligence solutions (detail held at a higher classification). RSCD supporting the transition of SEAHORSE to a fully integrated, cloud-based, operational system.

FY 2023 funding will continue the planned data collection, algorithm enhancement, algorithm performance assessment, and system integration activities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Remote Sensing Capability Development (RSCD)	7.056	4.442	4.745	0.000	4.745
Articles:	-	-	-	-	-
FY 2022 Plans: - Continue to collect data in various weather and sea states to broaden the range of environmental conditions, reduce uncertainty in environmental prediction, and generate training data sets for Machine Learning. - Continue to conduct software algorithm performance analysis and enhancements to automatically detect oceanographic phenomena and data repository to test and evaluate, create performance metrics, and understand computational performance of algorithms and technologies that enhance the fleet's battle space awareness. - Continue to conduct software algorithm enhancements to address improvements identified through performance analysis. - Continue to integrate software algorithm enhancements. - Continue to coordinate TCPED process amongst inter-agencies to support Navy Missions.					
FY 2023 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2363 / *Remote Sensing Capability Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
- Continue to collect data in various weather and sea states to broaden the range of environmental conditions, reduce uncertainty in environmental prediction, and generate training data sets for Machine Learning. - Continue to conduct software algorithm performance analysis and enhancements to automatically detect oceanographic phenomena and data repository to test and evaluate, create performance metrics, and understand computational performance of algorithms and technologies that enhance the fleet's battle space awareness. - Continue to conduct software algorithm enhancements to address improvements identified through performance analysis. - Continue to integrate software algorithm enhancements. - Continue to coordinate Tasking, Collections, Processing, Exploitation, and Dissemination (TCPED) process amongst inter-agencies to support Navy Missions ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** The increase in funding from FY2022 to FY2023 is attributed to the continuation of software algorithm enhancements.					
Accomplishments/Planned Programs Subtotals	7.056	4.442	4.745	0.000	4.745

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The Remote Sensing Capabilities Development (RSCD) acquisition strategy is being managed by the Program Executive Office Command, Control, Communications, Computers and Intelligence (PEO C4I) and Space, via a Project Definition Document (PDD) construct for acquisition rigor and oversight.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 2363 / *Remote Sensing Capability Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RSCD Software Development	C/FFP	SAIC : Viriginia	0.866	1.152	Feb 2021	0.494	Feb 2022	0.512	Feb 2023	-		0.512	Continuing	Continuing	Continuing
RSCD Software Development	WR	NRL : Washington, DC	1.347	1.794	Nov 2020	0.246	Nov 2021	0.355	Nov 2022	-		0.355	Continuing	Continuing	Continuing
RSCD Software Development	C/FFP	Cubic/Valiant : San Diego, CA	1.385	1.838	Apr 2021	0.996	Apr 2022	1.073	Apr 2023	-		1.073	Continuing	Continuing	Continuing
RSCD Software Development	WR	NRL : Stennis Space Center, MS	0.000	0.000		0.243	Nov 2021	0.252	Nov 2022	-		0.252	Continuing	Continuing	Continuing
		Subtotal	3.598	4.784		1.979		2.192		-		2.192	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RSCD Architecture	WR	NIWC PAC : San Diego, CA	0.849	0.669	Mar 2021	0.739	Nov 2021	0.766	Nov 2022	-		0.766	Continuing	Continuing	Continuing
		Subtotal	0.849	0.669		0.739		0.766		-		0.766	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RSCD Intgr, Assy & Test	WR	NIWC PAC : San Diego, CA	0.986	1.603	Mar 2021	0.000		0.000		-		0.000	0.000	2.589	-
RSCD Intgr, Assy & Test	C/FFP	Cubic/Valiant : San Diego, CA	0.000	0.000		0.985	Apr 2022	1.021	Apr 2023	-		1.021	Continuing	Continuing	Continuing
RSCD Intgr, Assy & Test	WR	DOE : Albuquerque, NM	0.000	0.000		0.739	Nov 2021	0.766	Nov 2022	-		0.766	Continuing	Continuing	Continuing
		Subtotal	0.986	1.603		1.724		1.787		-		1.787	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 2363 / *Remote Sensing Capability Development*	

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	5.433	7.056		4.442		4.745		-		4.745	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2363 / *Remote Sensing Capability Development*

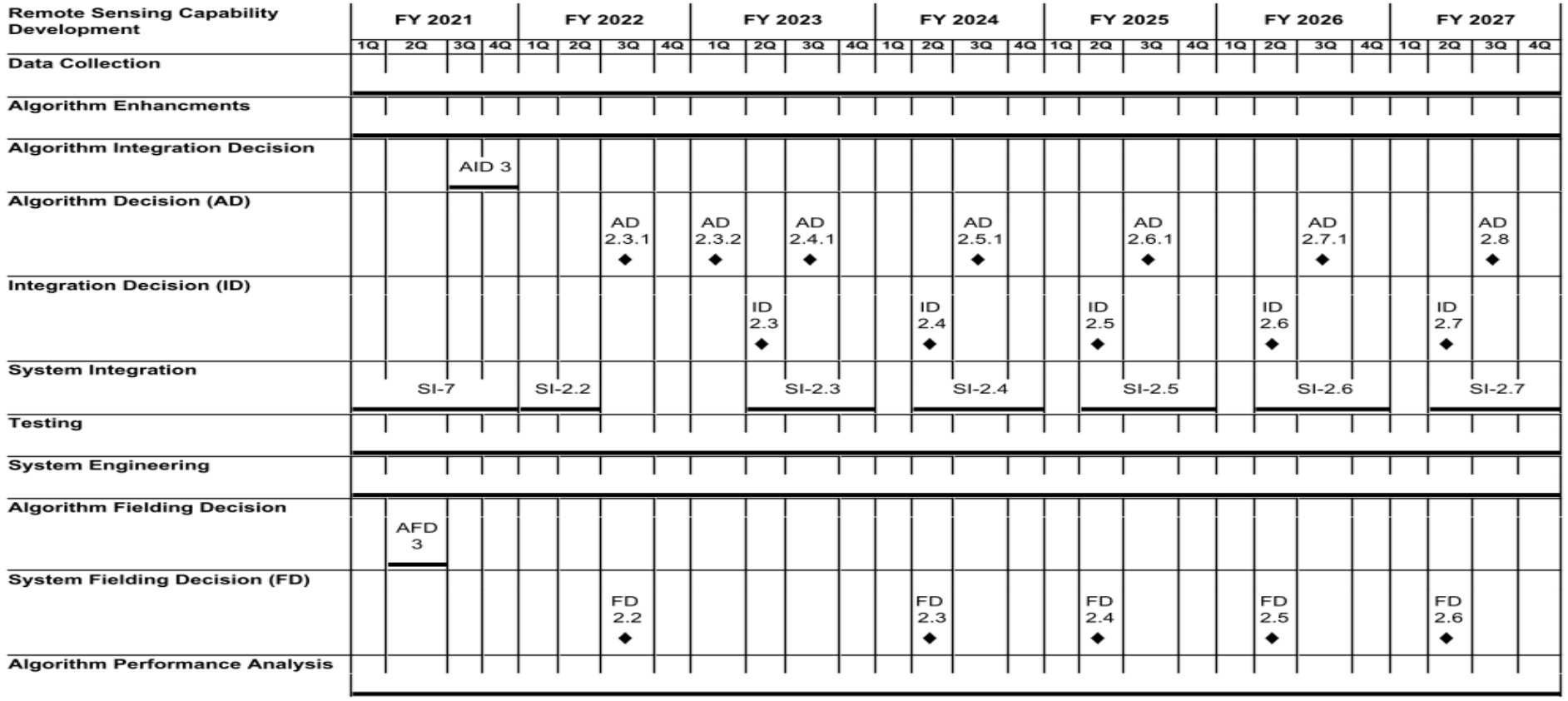


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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2363 / *Remote Sensing Capability Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Remote Sensing Capability Development				
Data Collection:	1	2021	4	2027
Algorithm Enhancments:	1	2021	4	2027
Algorithm Integration Decision: Algorithm Integration Decision 3	3	2021	4	2021
Algorithm Decision (AD): Algorithm Decision 2.3.1	3	2022	3	2022
Algorithm Decision (AD): Algorithm Decision 2.3.2	1	2023	1	2023
Algorithm Decision (AD): Algorithm Decision 2.4.1	3	2023	3	2023
Algorithm Decision (AD): Algorithm Decision 2.5.1	3	2024	3	2024
Algorithm Decision (AD): Algorithm Decision 2.6.1	3	2025	3	2025
Algorithm Decision (AD): Algorithm Decision 2.7.1	3	2026	3	2026
Algorithm Decision (AD): Algorithm Decision 2.8	3	2027	3	2027
Integration Decision (ID): Integration Decision 2.3	2	2023	2	2023
Integration Decision (ID): Integration Decision 2.4	2	2024	2	2024
Integration Decision (ID): Integration Decision 2.5	2	2025	2	2025
Integration Decision (ID): Integration Decision 2.6	2	2026	2	2026
Integration Decision (ID): Integration Decision 2.7	2	2027	2	2027
System Integration: System Integration 7	1	2021	4	2021
System Integration: System Integration 2.2	1	2022	2	2022
System Integration: System Integration 2.3	2	2023	4	2023
System Integration: System Integration 2.4	2	2024	4	2024
System Integration: System Integration 2.5	2	2025	4	2025
System Integration: System Integration 2.6	2	2026	4	2026

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 2363 / *Remote Sensing Capability Development*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
System Integration: System Integration 2.7	2	2027	4	2027
Testing:	1	2021	4	2027
System Engineering:	1	2021	4	2027
Algorithm Fielding Decision: Algorithm Fielding Decision 3	2	2021	2	2021
System Fielding Decision (FD): System Fielding Decision 2.2	3	2022	3	2022
System Fielding Decision (FD): System Fielding Decision 2.3	2	2024	2	2024
System Fielding Decision (FD): System Fielding Decision 2.4	2	2025	2	2025
System Fielding Decision (FD): System Fielding Decision 2.5	2	2026	2	2026
System Fielding Decision (FD): System Fielding Decision 2.6	2	2027	2	2027
Algorithm Performance Analysis:	1	2021	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 3050 / *Deployable JT Command and Control*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
3050: *Deployable JT Command and Control*	2.817	2.911	2.579	3.840	-	3.840	3.770	3.523	3.575	3.631	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Deployable Joint Command and Control (DJC2) provides a self-contained, standardized, rapidly deployable, modular, scalable, and reconfigurable joint command and control (C2) capability to designated Geographic Combatant Commands (GCCs). DJC2 is the materiel solution to Defense Planning Guidance that called for the development of standing Joint Task Forces (JTFs) with a deployable C2 capability. DJC2 will ensure that Joint Force Commanders (JFC) are equipped, as well as trained and organized, to carry out their C2 responsibilities. DJC2 provides GCCs and JFCs a mission critical, integrated family of systems with which to plan, control, coordinate, execute, and assess operations. It is designed to deploy rapidly, set up within hours, and quickly provide necessary C2 mission and collaboration functionality across the full spectrum of JTF operations. The DJC2 has also been deployed in support of Humanitarian Assistance and Disaster Relief (HA/DR) efforts. The capability is intended for all levels of conflict and will be reconfigurable to meet specific GCC and JTF mission requirements. This capability is interoperable with higher and adjacent echelons of command (to include coalition allies) as well as with supporting elements to include joint forces.

FY23 funding supports development efforts for systems engineering, integration, and DJC2 Test Bed. Focus areas include emerging cyber security technologies and cloud hosting environments.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Systems Engineering & Integration	1.310	1.163	1.728	0.000	1.728
Articles:	-	-	-	-	-
FY 2022 Plans: Expanding capabilities of common infrastructure to increase speed to capability through containerization technologies and utilization of Development, Security, and Operations (DevSecOps) in order to rapidly deliver mission tailored applications and cloud based services. Developing Tier 1 capabilities to support multi-cloud environments and implementing software defined wide area network (SD-WAN) technologies to increase cyber posture. Evaluating technologies to support migration to Impact level 6 (IL6) and Impact Level 7 (IL7) cloud environments.					
FY 2023 Base Plans: Continue to expand capabilities of common infrastructure to increase speed to capability through containerization technologies and utilization of Development, Security, and Operations (DevSecOps) in order to rapidly deliver mission tailored applications and cloud based services. Further develop Tier 1 capabilities					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3050 / *Deployable JT Command and Control*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
to support multi-cloud environments and software defined wide area network (SD-WAN) technologies. Initiate evaluation of technologies to support migration to Internet Protocol version 6 (IPv6), 5G, and Department of Defense cloud environments. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase from FY22 to FY23 is associated with the initial engineering and evaluation of technologies to support migration to Internet Protocol version 6 (IPv6) and 5G.					
Title: DJC2 RDT&E Test Bed ***Articles:*** ***FY 2022 Plans:*** Testing technologies to support containerization of applications and services, as well as migration to Impact level 6 (IL6) and Impact Level 7 (IL7) cloud environments. Testing Tier 1 capabilities to support multi-cloud environments and software defined wide area network (SD-WAN) technologies to increase cyber posture. ***FY 2023 Base Plans:*** Beginning in FY23, test technologies to support migration to Internet Protocol version 6 (IPv6), 5G, and multiple Department of Defense cloud environments. Continue to test technologies that support containerization of applications and services to increase speed to capability. Continue to test and evaluate Tier 1 capabilities to support multi-cloud environments and software defined wide area network (SD-WAN) technologies. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase from FY22 to FY23 is associated with the initial testing and evaluation of technologies to support migration to Internet Protocol version 6 (IPv6) and 5G.	1.601 -	1.416 -	2.112 -	0.000 -	2.112 -
Accomplishments/Planned Programs Subtotals	2.911	2.579	3.840	0.000	3.840

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3050 / *Deployable JT Command and Control*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• OPN /2906: *Tactical/ Mobile C4I Systems/DJC2*	2.278	2.051	2.100	-	2.100	2.124	2.164	2.208	2.242	Continuing	Continuing

Remarks

D. Acquisition Strategy

This RDT&E line supports an evolutionary acquisition strategy. The intent of this strategy is to: develop a system based upon a current understanding of joint requirements; rapidly field systems based upon those requirements; analyze operational utilization of the systems; and roll the results of the analysis into periodic upgrades of the systems to maintain currency and maximize operational effectiveness. Efforts include investigation of emerging technologies through study, development, and associated testing for feasibility of program insertion. The baseline configuration is based upon existing Command, Control, Communications, Computers, & Intelligence (C4I) systems, scaled to the Combatant Command level. The follow-on configurations will include newly developed capabilities based on emergent, joint requirements and operational feedback based upon utilization of earlier delivered systems. Ultimately, the goal is to perform quick and affordable integration of emergent transformational Commercial Off the Shelf (COTS) and Government Off the Shelf (GOTS) technologies in support of information warfare and overall efforts required to pace the threat. This is accomplished via technical analysis and engineering efforts associated with implementation of new technology to enable rapid introduction of new products and technology, prevent obsolescence, and end of support issues enhancements via incremental software & hardware upgrades delivered on annual build release.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3050 / *Deployable JT Command and Control*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NSWC : Panama City, FL	0.392	0.354	Dec 2020	0.314	Dec 2021	0.467	Dec 2022	-		0.467	Continuing	Continuing	Continuing
Hardware/Software Development	C/CPAF	GTRI : Atlanta, GA	0.669	0.616	Dec 2020	0.547	Dec 2021	0.812	Dec 2022	-		0.812	Continuing	Continuing	Continuing
		Subtotal	1.061	0.970		0.861		1.279		-		1.279	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Integration	WR	NSWC : Panama City, FL	0.367	0.340	Dec 2020	0.302	Dec 2021	0.449	Dec 2022	-		0.449	Continuing	Continuing	Continuing
		Subtotal	0.367	0.340		0.302		0.449		-		0.449	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test	WR	NSWC : Panama City, FL	0.794	0.913	Dec 2020	0.807	Dec 2021	1.204	Dec 2022	-		1.204	Continuing	Continuing	Continuing
Operational Test	WR	NSWC : Panama City, FL	0.446	0.512	Dec 2020	0.453	Dec 2021	0.676	Dec 2022	-		0.676	Continuing	Continuing	Continuing
		Subtotal	1.240	1.425		1.260		1.880		-		1.880	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	WR	NIWC PAC : San Diego, CA	0.149	0.176	Dec 2020	0.156	Dec 2021	0.232	Dec 2022	-		0.232	Continuing	Continuing	Continuing
		Subtotal	0.149	0.176		0.156		0.232		-		0.232	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 3050 / *Deployable JT Command and Control*	

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.817	2.911		2.579		3.840		-		3.840	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3050 / *Deployable JT Command and Control*

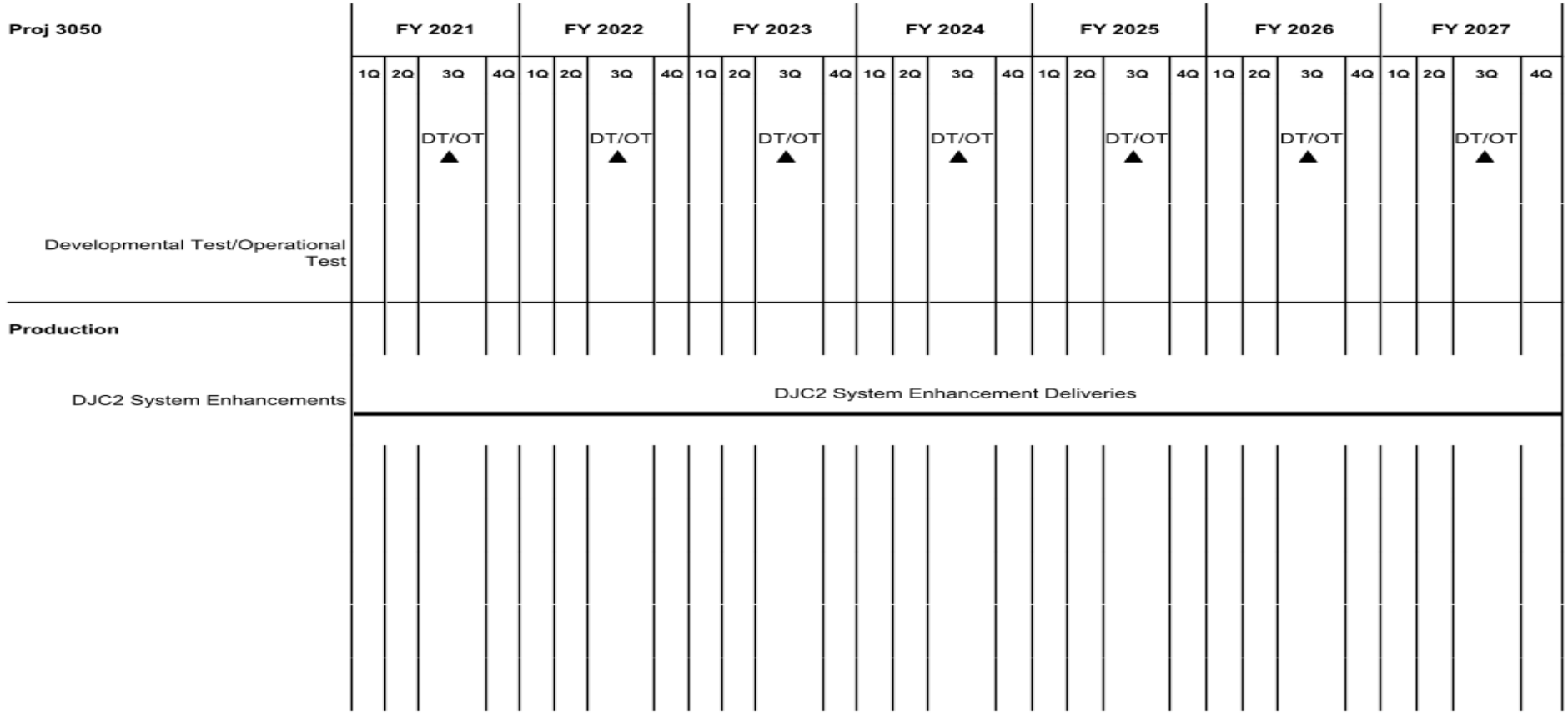

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3050 / *Deployable JT Command and Control*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3050				
Developmental Test/Operational Test FY 2021	3	2021	3	2021
Developmental Test/Operational Test FY 2022	3	2022	3	2022
Developmental Test/Operational Test FY 2023	3	2023	3	2023
Developmental Test/Operational Test FY 2024	3	2024	3	2024
Developmental Test/Operational Test FY 2025	3	2025	3	2025
Developmental Test/Operational Test FY 2026	3	2026	3	2026
Developmental Test/Operational Test FY 2027	3	2027	3	2027
Production: DJC2 System Enhancements: DJC2 System Enhancement Deliveries	1	2021	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
3260: *Naval Operations Business Logistics Enterprise (NOBLE)*	79.728	84.506	95.339	112.479	-	112.479	62.023	48.946	42.027	37.221	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Naval Operational Business Logistics Enterprise (NOBLE) is the logistics information technology family of systems comprised of the Naval Operational Supply System (NOSS), the Naval Maintenance, Repair, and Overhaul (N-MRO), and supporting capabilities to include the common platform hosting environment and data exchange solutions for Logistics Information Technology systems and applications. NOBLE enables combat lethality by generating and sustaining Navy and Marine Corps force readiness for operational commanders afloat and ashore, providing the foundational capability to keep ships driving, planes flying, and weapons firing from an equipment Operational Availability (Ao) perspective. NOBLE is the centerpiece of the Fleet's strategic imperative to improve Sailor, unit and group maintenance self-sufficiency combat operations in a communications and access-denied arena.

NOBLE's mission is to provide the Navy and Marine Corps with an integrated, scalable, and cybersecure capability that supports the management of logistical information, material, and funds required to maintain and operate ships, submarines, and aircraft.

Funding provides for separate NOSS and N-MRO LD Build 1 software licensing, site installation activities, data migration and validation, training development, and conduct of Government Limited Deployment (LD) 1 Independent Validation and Verification (IV&V), Functional Managers Certification (FMC), and operational testing (i.e. User Acceptance Testing (UAT)). Funding also provides for licensing and delivery of the common platform hosting environment and data exchange solutions to support the Limited Deployment 2 efforts in Fiscal Year 2024. NOSS LD1 in Fiscal Year 2023 is targeted for 2 shore site to include one (1) Navy Expeditionary Combat Command Head Quarters (NECC HQ), and one (1) Navy Expeditionary Intelligence Command (NEIC). N-MRO LD 1 in Fiscal Year 2023 is targeted for three separate venues to include one (1) Aviation squadron, one (1) USMC squadron, and one (1) DDG. The Government plans for a combined FY24 LD 1 NOSS and N-MRO UAT deployed to: one (1) DDG, one (1) Aviation Supply Detachment (ASD)/Fleet Readiness Center (FRC), and one (1) Aviation squadron.

Funding provides for completion of NOSS and N-MRO LD Build 2 prototyping and configuration, commencement of laboratory integration testing, development of training materials, and initial planning and preparation for a combined Government NOSS and N-MRO LD 2 IV&V, FMC, and UAT in Fiscal Year 2024. The Government plans for a combined FY24 LD 2 NOSS and N-MRO UAT deployed to a single unit/force level ship to exercise combined Aviation and Maritime capability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Naval Operational Supply System (NOSS)	29.054	34.609	30.479	0.000	30.479
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
FY 2022 Plans: Complete NOSS Limited Deployment (LD) Build 1 configuration; commence laboratory integration with interface partners, complete initial training materials, complete initial site installation activities, and commence Limited Deployment (LD) 1 Government IV&V in support of FMC, and operational testing (i.e. UAT) efforts targeted for Fiscal Year 2023. ***FY 2023 Base Plans:*** Complete NOSS LD 1 integration, testing, training, site installation activities, data migration and validation activities, and obtain a NOSS Authority to Operate (ATO). Complete Government IV&V and Functional Managers Certification (FMC), and perform User Acceptance Testing (UAT) for the following Limited Deployment sites in FY23: one (1) Navy Expeditionary Combat Command Head Quarters (NECC HQ), and one (1) Navy Expeditionary Intelligence Command (NEIC). Complete the NOSS Build 2/3 software development related to Food Service Operations, Ordnance Operations Wholesale and Retail Operations, to include agile sprint configuration and testing; commence integration with the supporting capabilities within the Consolidated Afloat Network Enterprise Services (CANES), the Navy ashore cloud, and the USMC operating environments; perform laboratory testing with interface partners; complete initial training materials; complete site installation activities; commence data migration and validation activities; and obtain a NOSS ATO. Commence the combined NOSS and NMRO Limited Deployment (LD) 1 and 2 Government IV&V in support of FMC, and UAT efforts targeted for Fiscal Year 2024. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease in funding profile from FY22 to FY23 due to directed changes to NOSS LD 1 FY23 Limited Deployment venues. Specifically, reduced the number of installs from six sites (one Navy squadron, one Fleet Readiness Center, one Marine Aviation Logistics Squadron (MALS), one Marine squadron, one Aviation Support Detachment (ASD), and one DDG) to two sites (one Navy Expeditionary Combat Command Head Quarters (NECC HQ), and one Navy Expeditionary Intelligence Command (NEIC) in FY23.					
Title: Naval Maintenance, Repair, and Overhaul (N-MRO)	55.452	60.730	82.000	0.000	82.000
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
FY 2022 Plans: Complete N-MRO Limited Deployment (LD) Build 1 configuration; commence laboratory integration with interface partners; complete integration within the Consolidated Afloat Network Enterprise Services (CANES), the Navy ashore cloud, and the USMC operating environments; and obtain a N-MRO ATO. Complete initial training materials, initial site installation activities, data migration and validation, and complete Government IV&V in support of FMC and operational testing (i.e. UAT) efforts targeted for Fiscal Year 2023. ***FY 2023 Base Plans:*** Complete N-MRO LD 1 integration, testing, training, site installation activities, data migration and validation activities, in order to support backward compatibility with multiple legacy systems to improve cyber security to meet current threat profiles. Complete Government Functional Managers Certification (FMC), and perform User Acceptance Testing (UAT) for the following Limited Deployment sites in FY23: one (1) Aviation squadron, one (1) USMC squadron, and one (1) DDG. Complete N-MRO Build 2 software development related to Aviation intermediate and Maritime nuclear organizational level maintenance, to include agile sprint configuration and testing; commence integration with the supporting capabilities within the Consolidated Afloat Network Enterprise Services (CANES), the Navy ashore cloud, and the USMC operating environments; perform laboratory testing with interface partners; complete initial training materials; complete site installation activites; commence data migration and validation activities; and obtain a N-MRO ATO. Commence the combined N-MRO and NOSS Limited Deployment (LD) 1 and 2 Government IV&V in support of FMC, and UAT efforts targeted for Fiscal Year 2024. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase in funding profile from FY22 to FY23 due to 1) negotiated Firm Fixed Price N-MRO licensing and maintenance agreement; 2) The N-MRO program is required to provide a backward compatible capability to multiple legacy systems during LD1 which drives increased integration, testing, training, site installation activities, data migration and validation activities; 3) funds are required to support licensing and delivery of the supporting capabilities (i.e. common platform hosting environment and data exchange solutions) is necessary					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
to support the combined N-MRO, and NOSS, Limited Deployments 1 and 2 venues for Fiscal Year 2024; 4) Improve cyber security to meet current threat profiles.					
Accomplishments/Planned Programs Subtotals	84.506	95.339	112.479	0.000	112.479

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• OPN/2611: *Naval Tact Cmd Supt Sys (NTCSS)*	15.385	14.439	19.038	-	19.038	18.936	17.405	17.707	18.051	Continuing	Continuing

Remarks

D. Acquisition Strategy

NOBLE has employed the use of competitive Other Transaction Authority (OTA). Software development/configuration will be comprised of multiple builds to include the ability to utilize mobile computing devices, each with increasing net-centric services capability. NOBLE leverages Commercial Off The Shelf (COTS) software programs. 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, and US Marine Corps environments.

NOBLE plans to award in Fiscal Year 2024 separate NOSS and N-MRO single source Production Contracts which were authorized under the OTA agreements. These single source production contracts will acquire procurement of licenses, license maintenance, functional technical refresh, help desk, training, and technical services to support full deployment.

NOBLE plans to award in Fiscal Year 2024 a separate common platform hosting environment and data exchange solution as a single source Production Contract which was authorized under the OTA agreement. This single source production contract will acquire procurement of licenses, license maintenance, functional technical refresh, and technical services to support full deployment.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**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 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NOME Software Development	MIPR	PEO STRI : Orlando, FL	6.011	0.000		0.000		0.000		-		0.000	0.000	6.011	-
NOME Software Development/Infrastucture	C/CPFF	Palantir : Palo Alto, CA	3.500	0.000		0.000		0.000		-		0.000	0.000	3.500	-
NAMS Software Development	MIPR	PEO STRI : Orlando, FL	4.912	0.000		0.000		0.000		-		0.000	0.000	4.912	-
NOSS Software Development/Infrastucture	C/CPFF	Palantir : Palo Alto, CA	3.500	0.643	Feb 2021	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
NOSS Software Development	MIPR	PEO STRI : Orlando, FL	17.419	22.312	Oct 2020	26.049	Oct 2021	25.269	Oct 2022	-		25.269	Continuing	Continuing	Continuing
NAMS Software Development/Infrastucture	C/CPFF	Palantir : Palo Alto, CA	3.500	0.000		0.000		0.000		-		0.000	0.000	3.500	-
N-MRO Software Development	MIPR	PEO STRI : Orlando, FL	0.000	46.167	Oct 2020	42.230	Oct 2021	55.600	Oct 2022	-		55.600	Continuing	Continuing	Continuing
N-MRO Software Development/Infrastructure	C/CPFF	NIWC Atlantic : Norflok, VA	0.000	2.237	Feb 2021	3.000	Jun 2022	18.600	Oct 2022	-		18.600	Continuing	Continuing	Continuing
NOME System Engineering	WR	NIWC Atlantic : Norfolk, VA	2.940	0.000		0.000		0.000		-		0.000	0.000	2.940	-
NOSS System Engineering	WR	NIWC Atlantic : Norfolk, VA	3.644	0.947	Oct 2020	3.000	Oct 2021	1.300	Oct 2022	-		1.300	Continuing	Continuing	Continuing
NOSS System Engineering	WR	USFFC : Norfolk, VA	1.746	0.000		0.000		0.000		-		0.000	0.000	1.746	-
N-MRO System Engineering	WR	NIWC Atlantic : Norfolk, VA	0.000	2.147	Oct 2020	5.000	Oct 2021	2.000	Oct 2022	-		2.000	Continuing	Continuing	Continuing
NAMS Detailed BPR	WR	NAVAIR : Patuxent River, MD	0.849	0.000		0.000		0.000		-		0.000	0.000	0.849	-
NAMS System Engineering	WR	NIWC Atlantic : Norfolk, VA	3.690	0.000		0.000		0.000		-		0.000	0.000	3.690	-
N-MRO Detailed BPR	WR	NAVAIR : Patuxent River, MD	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
NAMS Analyis of Alternatives (AoA)	C/CPFF	Client Solution Architects LLC : San Diego, CA	0.537	0.000		0.000		0.000		-		0.000	0.000	0.537	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**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 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NAMS Analyis of Alternatives (AoA)	MIPR	WHQS : Washington DC	0.539	0.000		0.000		0.000		-		0.000	0.000	0.539	-
		Subtotal	52.787	74.453		79.279		102.769		-		102.769	Continuing	Continuing	N/A

Remarks

Variance in N-MRO software development and infrastructure costs is driven by the license fees and development of the common hosting environment and data exchange efforts to support the N-MRO and NOSS Limited Deployments.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NOME FMC Developmental Test & Evaluation	WR	NAVSEA : Washington, D.C.	0.400	0.000		0.000		0.000		-		0.000	0.000	0.400	-
NOME Operational Test & Evaluation	WR	COTF : Norfolk, VA	0.200	0.000		0.000		0.000		-		0.000	0.000	0.200	-
NAMS FMC Developmental Test & Evaluation	WR	NAVAIR : Patuxent River, MD	0.450	0.000		0.000		0.000		-		0.000	0.000	0.450	-
NAMS Operational Test & Evaluation	WR	COTF : Norfolk, VA	0.250	0.000		0.000		0.000		-		0.000	0.000	0.250	-
N-MRO FMC Developmental Test & Evaluation	WR	NAVAIR : Patuxent River, MD	0.000	0.000		0.500	Oct 2021	1.000	Oct 2022	-		1.000	Continuing	Continuing	Continuing
N-MRO Operational Test & Evaluation	WR	COTF : Norfolk, VA	0.000	0.000		0.000	Oct 2021	0.200	Oct 2022	-		0.200	Continuing	Continuing	Continuing
NOSS FMC Developmental Test & Evaluation	WR	NAVSUP : Mechanicsburg, PA	0.700	0.000		0.200	Oct 2021	0.500	Oct 2022	-		0.500	Continuing	Continuing	Continuing
NOSS Operational Test & Evaluation (Documentation)	WR	COTF : Norfolk, VA	0.500	0.000		0.000	Oct 2021	0.200	Oct 2022	-		0.200	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	2.500	0.000		0.700		1.900		-		1.900	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NOME System Engineering Support	WR	NIWC Pacific : San Diego, CA	2.620	0.000		0.000		0.000		-		0.000	0.000	2.620	-
NOSS System Engineering Support	WR	NIWC Pacific : San Diego, CA	4.010	2.830	Oct 2020	2.000	Oct 2021	1.000	Oct 2022	-		1.000	Continuing	Continuing	Continuing
NAMS System Engineering Support	WR	NIWC Pacific : San Diego, CA	2.870	0.000		0.000		0.000		-		0.000	0.000	2.870	-
N-MRO Systems Engineering Support	WR	NIWC Pacific : San Diego, CA	0.000	2.153	Oct 2020	4.000	Oct 2021	2.600	Oct 2022	-		2.600	Continuing	Continuing	Continuing
NOSS Systems Engineering Support	C/CPFF	Deloitte : San Diego, CA	4.016	1.128	Oct 2020	2.160	Jan 2022	1.210	Oct 2022	-		1.210	Continuing	Continuing	Continuing
NAMS Systems Engineering Support	C/CPFF	SENTEK Global : San Diego, CA	1.575	0.000		0.000		0.000		-		0.000	0.000	1.575	-
NOME Systems Engineering Support	C/CPFF	SENTEK Global : San Diego, CA	1.350	0.000		0.000		0.000		-		0.000	0.000	1.350	-
N-MRO Systems Engineering Support	C/CPFF	Deloitte : San Diego, CA	0.000	2.300	Jan 2021	3.500	Jan 2022	1.000	Oct 2022	-		1.000	Continuing	Continuing	Continuing
NOME Program Management Support	C/CPFF	Booz Allen Hamilton : San Diego, CA	2.000	0.000		0.000		0.000		-		0.000	0.000	2.000	-
NOSS Program Management Support	C/CPFF	Booz Allen Hamilton : San Diego, CA	3.000	1.194	Oct 2020	1.200	Oct 2021	1.000	Oct 2022	-		1.000	Continuing	Continuing	Continuing
NAMS Program Management Support	C/CPFF	Booz Allen Hamilton : San Diego, CA	3.000	0.000		0.000		0.000		-		0.000	0.000	3.000	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**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 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
N-MRO Program Management Support	C/CPFF	Booz Allen Hamilton : San Diego, CA	0.000	0.448	Oct 2020	2.500	Oct 2021	1.000	Oct 2022	-		1.000	Continuing	Continuing	Continuing
		Subtotal	24.441	10.053		15.360		7.810		-		7.810	Continuing	Continuing	N/A

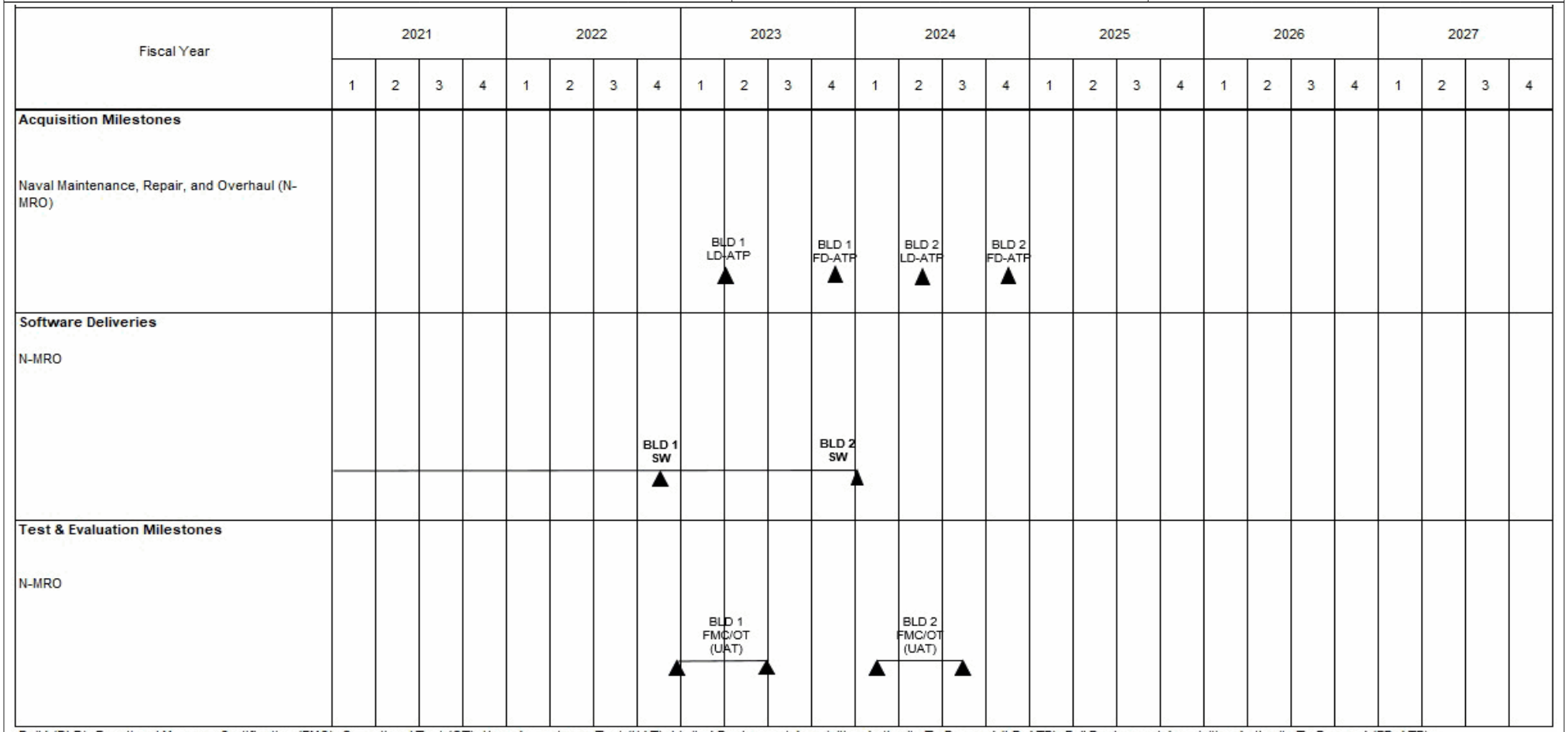
Remarks

The decrease in FY23 Management Services is due to shifting resources to OMN to support deploying Build 1 in FY23.

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	79.728	84.506		95.339		112.479		-		112.479	Continuing	Continuing	N/A

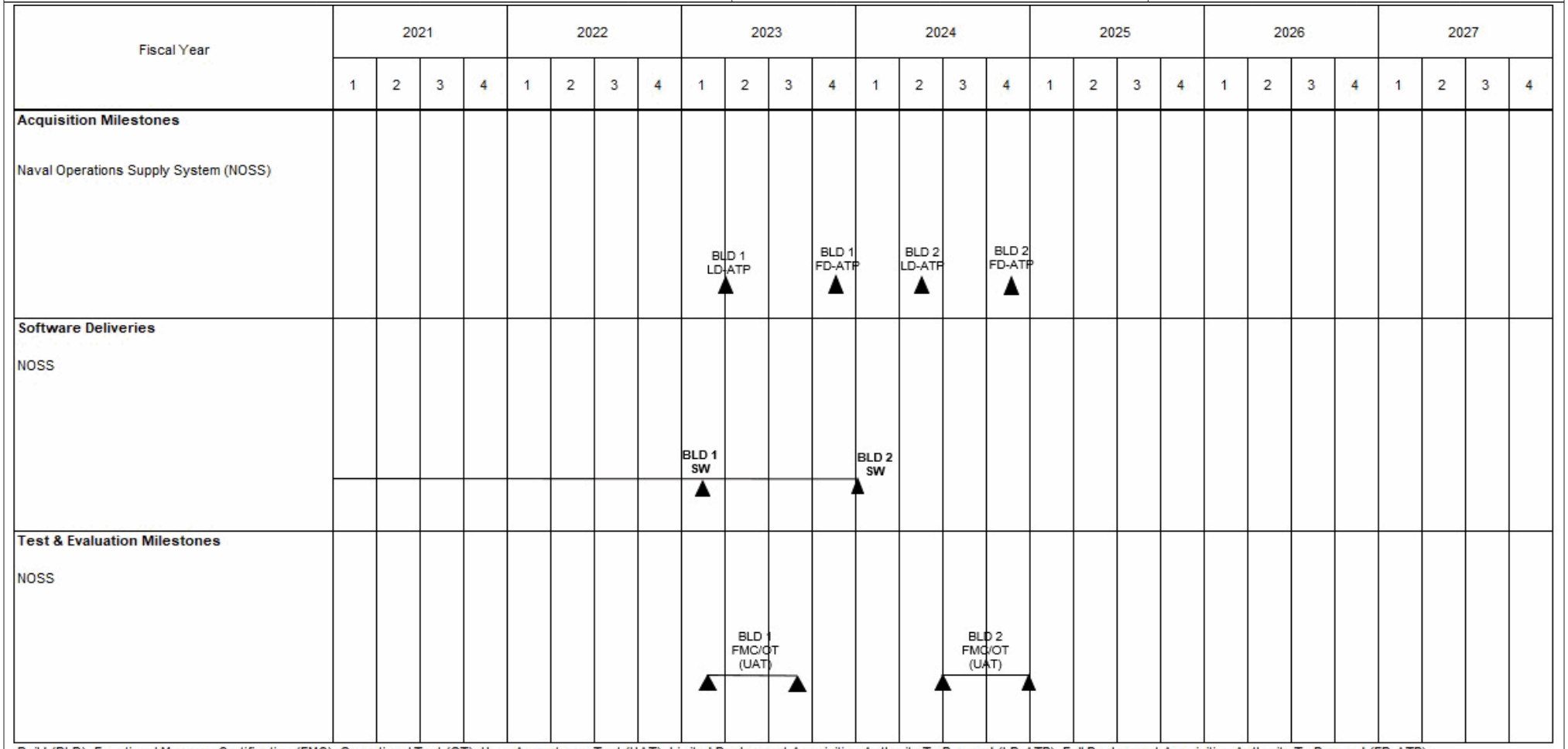
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*



Build (BLD); Functional Manager Certification (FMC); Operational Test (OT); User Acceptance Test (UAT); Limited Deployment Acquisition Authority To Proceed (LD-ATP); Full Deployment Acquisition Authority To Proceed (FD-ATP); Software (SW)

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*



Build (BLD); Functional Manager Certification (FMC); Operational Test (OT); User Acceptance Test (UAT); Limited Deployment Acquisition Authority To Proceed (LD-ATP); Full Deployment Acquisition Authority To Proceed (FD-ATP); Software (SW)

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**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 Maintenance, Repair, and Overhaul (N-MRO) Build 1 Software Development	1	2021	4	2022
Naval Operational Supply System (NOSS) Build 1 Software Development	1	2021	1	2023
Naval Maintenance, Repair, and Overhaul (N-MRO) Build 2 Software Development	4	2022	4	2023
Naval Maintenance, Repair, and Overhaul (N-MRO) Build 1 Functional Manager Certification/ Operational Test (User Acceptance Test)	4	2022	2	2023
Naval Operational Supply System (NOSS) Build 2 Software Development	1	2023	4	2023
Naval Operational Supply System (NOSS) Build 1 Limited Deployment Authority to Proceed	2	2023	2	2023
Naval Maintenance, Repair, and Overhaul (N-MRO) Build 1 Limited Deployment Authority to Proceed	2	2023	2	2023
Naval Operational Supply System (NOSS) Build 1 Functional Manager Certification/ Operational Test (User Acceptance Test)	1	2023	3	2023
Naval Operational Supply System (NOSS) Build 1 Full Deployment Authority to Proceed	4	2023	4	2023
Naval Maintenance, Repair, and Overhaul (N-MRO) Build 1 Full Deployment Authority to Proceed	4	2023	4	2023
Naval Maintenance, Repair, and Overhaul (N-MRO) Build 2 Functional Manager Certification/ Operational Test (User Acceptance Test)	1	2024	3	2024
Naval Operational Supply System (NOSS) Build 2 Limited Deployment Authority to Proceed	2	2024	2	2024
Naval Maintenance, Repair, and Overhaul (N-MRO) Build 2 Limited Deployment Authority to Proceed	2	2024	2	2024
Naval Operational Supply System (NOSS) Build 2 Functional Manager Certification/ Operational Test (User Acceptance Test)	2	2024	4	2024

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3260 / *Naval Operations Business Logistics Enterprise (NOBLE)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Naval Operational Supply System (NOSS) Build 2 Full Deployment Authority to Proceed	4	2024	4	2024
Naval Maintenance, Repair, and Overhaul (N-MRO) Build 2 Full Deployment Authority to Proceed	4	2024	4	2024

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 3323 / *Maritime Tactical Command & Control (MTC2)*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
3323: *Maritime Tactical Command & Control (MTC2)*	0.000	0.820	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.820
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Project Unit 3323: FY2021 control is due to Maritime Tactical Command & Control (MTC2) transitioning into the Software and Digital Technology Pilot Program under the new Budget Activity 08, and designated as a new start in FY2021, the program currently has funding executed out of both their old Program Element (PE) (0604231N) and their new PE (0608321N). The program had to execute funding out of the old PE during the FY2021 Continuing Resolution (CR) and working with the Defense Finance and Accounting Service (DFAS) to transfer all expenditures from the old PE 0604321N to the new PE 0608321N.

A. Mission Description and Budget Item Justification

Project Unit 3323: FY2021 control is due to Maritime Tactical Command & Control (MTC2) transitioning into the Software and Digital Technology Pilot Program under the new Budget Activity 08, and designated as a new start in FY2021, the program currently has funding executed out of both their old PE (0604231N) and their new PE (0608321N). The program had to execute funding out of the old PE during the FY2021 Continuing Resolution (CR) and working with DFAS to transfer all expenditures from the old PE 0604321N to the new PE 0608321N.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: MTC2	0.820	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2022 Plans: N/A					
FY 2023 Base Plans: N/A					
FY 2023 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	0.820	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3323 / *Maritime Tactical Command & Control (MTC2)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• 0608231N/3323: *MARITIME TACT CMD & CONTROL - SOFT PLT PRGM*	10.969	14.855	11.198	-	11.198	11.485	11.522	11.702	11.873	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3323 / *Maritime Tactical Command & Control (MTC2)*

Product Development ($ in Millions)

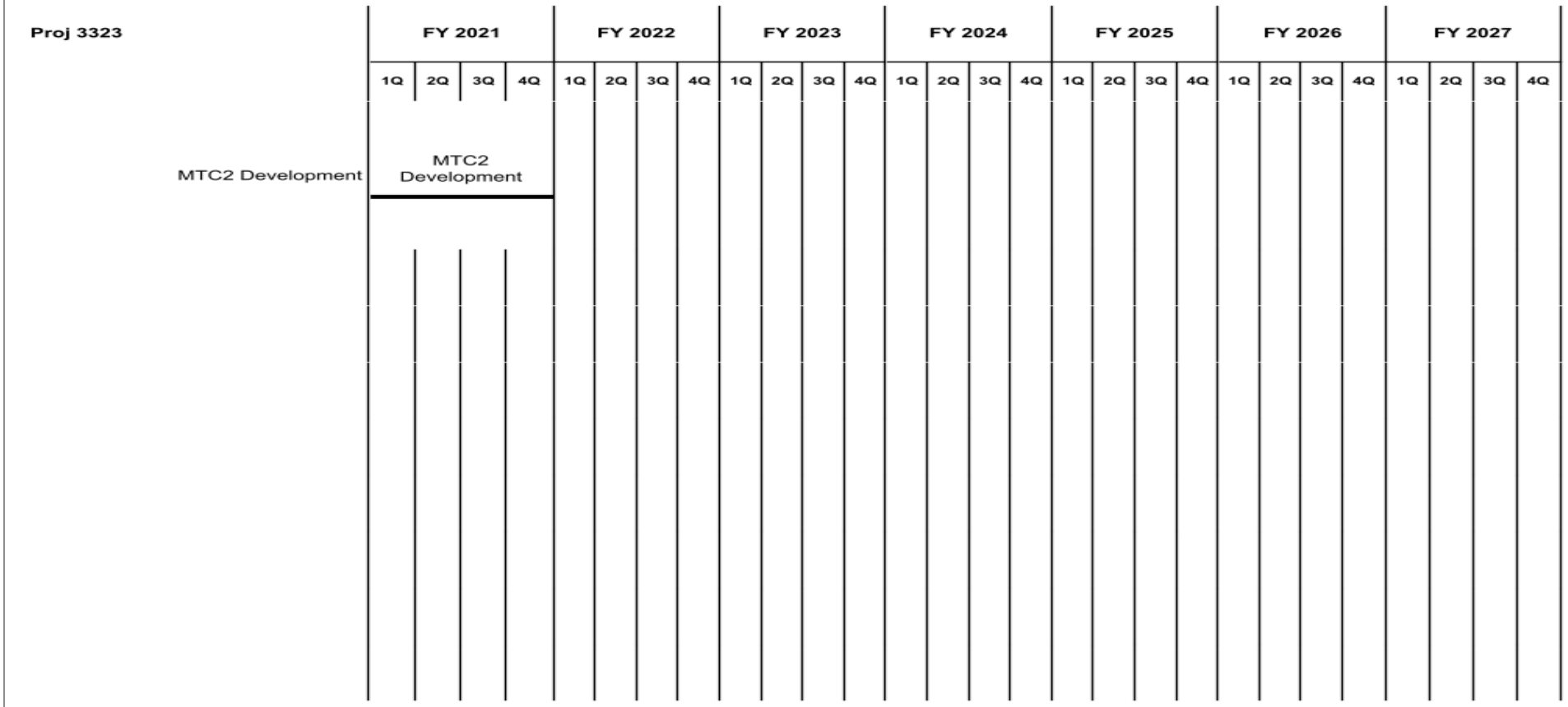
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MTC2 Development	Various	Various : Various	0.000	0.820	Oct 2020	0.000		0.000		-		0.000	0.000	0.820	-
		Subtotal	0.000	0.820		0.000		0.000		-		0.000	0.000	0.820	N/A

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.820		0.000		0.000		-		0.000	0.000	0.820	N/A

Remarks

Project Unit 3323: FY2021 delta is due to Maritime Tactical Command & Control (MTC2) transitioning into the Software and Digital Technology Pilot Program under the new Budget Activity 08, and designated as a new start in FY2021, the program currently has funding executed out of both their old PE (0604231N) and their new PE (0608321N). The program had to execute funding out of the old PE during the FY2021 Continuing Resolution (CR) and working with DFAS to transfer all expenditures from the old PE 0604321N to the new PE 0608321N.

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3323 / *Maritime Tactical Command & Control (MTC2)*



2023PB - 0604231N - 3323

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3323 / *Maritime Tactical Command & Control (MTC2)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3323				
MTC2 Development: MTC2 Development	1	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 3324 / *Navy Air Operations Command and Control (NAOC2)*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
3324: *Navy Air Operations Command and Control (NAOC2)*	16.534	0.497	0.717	0.740	-	0.740	0.761	0.773	0.789	0.805	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Navy Air Operations Command and Control (NAOC2): NAOC2 tests and integrates US Air Force program of record systems - Theater Battle Management Core System (TBMCS) and its replacement Kessel Run Applications Kit for Enterprise Navy (KRAKEN) which provides an integrated and scalable planning system for standardized, secure, and automated decision support for Air Force, Joint, and Allied commanders worldwide - to operate in the Navy enterprise network environment such as Consolidated Afloat Networks and Enterprise Services (CANES). These programs provide automated air operations planning, execution management and intelligence capabilities for fleet commanders, Commander Carrier Strike Groups, Commander Expeditionary Strike Groups, Commander Landing Forces, and Joint Task Force Commanders. KRAKEN aligns with the Compile to Combat (C2C24) construct in providing rapid, agile delivery of capabilities to the fleet by commercial cloud infrastructure using Development, Security, Operations (DevSecOps) cloud native applications. KRAKEN is comprised of multiple tactical software applications that will provide continuous iterate delivery of software to shipboard and shore users. It will also align with the Joint C2 Reference Architecture (JC2RA) such as CANES. KRAKEN is not natively compatible with Navy Information Technology (IT) infrastructure, such as CANES, and requires a significant level of system integration. Continuation of Navy integration and test efforts will significantly enhance the ability of the Joint Force Air Component Commander and Combined Air Operations Center personnel to plan daily air operations including strike, airlift, offensive/defensive air, missile defense, and refueling missions in support of combat operations. Developmental Testing is continuous and operates in parallel with the DevSecOps construct. KRAKEN will be continued for new technology insertion into Navy infrastructure network and hardware in support of Naval Air C2 and Net Enabled Weapons system integration. KRAKEN addresses the requirement of war fighter distributed planning and execution processes along with significantly improving Joint interoperability. TBMCS continues a hardware transition to CANES. Currently, TBMCS is the key system that is used to conduct real world air planning in the Joint and Navy environments. KRAKEN will replace TBMCS while bringing more flexibility to the war fighter.

FY23 funding supports KRAKEN integration and development of Kubernetes based containers from the United States Air Force (USAF) into the CANES environment, and the development of the Commander Operational Test & Evaluation Force (COMOPTEVFOR), USAF, and Air Force Operational Test and Evaluation Center (AFOTEC) joint testing and certification plan.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Kessel Run Applications Kit for Enterprise Navy (KRAKEN) Integration and Testing	0.497	0.717	0.740	0.000	0.740
Articles:	-	-	-	-	-
FY 2022 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3324 / *Navy Air Operations Command and Control (NAOC2)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Continue integration and development of Kubernetes based containers from the United States Air Force (USAF) into the Consolidated Afloat Networks and Enterprise Services (CANES)/Agile Core Services (ACS) environment. Continue Integration of KRAKEN containers into the RedHat ACS environment as a hosted system. Continue development of joint testing and certification plan for Commander Operational Test & Evaluation Force (COMOPTEVFOR), USAF, Air Force Operational Test and Evaluation Center (AFOTEC). ***FY 2023 Base Plans:*** Begin fielding KRAKEN applications that have been fully containerized and ready for fielding to ships equipped with the correct version of CANES/ACS. Continue working with the USAF Kessel Run (KR) team to incorporate Navy user feedback into future releases of fielded applications. Continue Integration of new KRAKEN containers into the RedHat ACS and participating in joint testing with COMOPTEVFOR, USAF, AFOTEC. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY23 increase is driven by inflation.					
Accomplishments/Planned Programs Subtotals	0.497	0.717	0.740	0.000	0.740

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Theater Battle Management Core System (TBMCS) and KRAKEN are designed, developed, and delivered by the Air Force and will be integrated for a Navy Common Computing Environment (CCE) such as Consolidated Afloat Network and Enterprise Services (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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3324 / *Navy Air Operations Command and Control (NAOC2)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering/ Training DevelopmentText/ Configuration Management	WR	NIWC Pacific : San Diego, CA	3.983	0.040	Nov 2020	0.095	Nov 2021	0.000		-		0.000	Continuing	Continuing	Continuing
Integration and Testing	MIPR	CECOM/MITRE : San Diego, CA	0.367	0.090	Nov 2020	0.169	Nov 2021	0.000		-		0.000	Continuing	Continuing	Continuing
Integration and Testing	WR	NIWC Pacific : San Diego, CA	5.011	0.321	Nov 2020	0.378	Nov 2021	0.000		-		0.000	Continuing	Continuing	Continuing
NAOC2 Product Development	Various	VARIOUS : VARIOUS	2.512	0.000		0.000		0.000		-		0.000	0.000	2.512	2.512
Systems Engineering/ Training Development/ Configuration Management	WR	NIWC Atlantic : Charleston, SC	0.000	0.000		0.000		0.480	Nov 2022	-		0.480	0.000	0.480	-
Integration and Testing	WR	NIWC Atlantic : Charleston, SC	0.000	0.000		0.000		0.184	Nov 2022	-		0.184	0.000	0.184	-
		Subtotal	11.873	0.451		0.642		0.664		-		0.664	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development/ILS Support	WR	VARIOUS : VARIOUS	0.538	0.000		0.000		0.000		-		0.000	0.000	0.538	0.538
		Subtotal	0.538	0.000		0.000		0.000		-		0.000	0.000	0.538	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation	WR	COMOPTEVFOR : Norfolk, VA	0.404	0.046	Nov 2020	0.075	Nov 2021	0.000		-		0.000	0.000	0.525	0.534
Developmental Test & Evaluation	WR	NIWC Pacific : San Diego, CA	2.651	0.000		0.000		0.076	Nov 2022	-		0.076	0.000	2.727	2.651

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 3324 / *Navy Air Operations Command and Control (NAOC2)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	3.055	0.046		0.075		0.076		-		0.076	0.000	3.252	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering and Program Management Support	C/CPFF	Various : San Diego, CA	1.068	0.000		0.000		0.000		-		0.000	0.000	1.068	1.068
		Subtotal	1.068	0.000		0.000		0.000		-		0.000	0.000	1.068	N/A

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	16.534	0.497		0.717		0.740		-		0.740	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3324 / *Navy Air Operations Command and Control (NAOC2)*

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: March 2022
Appropriation/Budget Activity RDT&E,N 1319 / 05	R-1 Program Element (Number/Name) PE 0604231N / Tactical Command System	Project (Number/Name) 3324/Navy Air Operations Command and Control (NAOC2)

Fiscal Year	2021				2022				2023				2024				2025				2026				2027			
	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
Kessel Run Applications Kit for Enterprise Navy (KRAKEN) Integration and Test						Continuous Software Application - Agile Testing and Development																						

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 3324 / *Navy Air Operations Command and Control (NAOC2)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3324				
Kessel Run Applications Kit for Enterprise Navy (KRAKEN) Integration and Test	1	2021	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604231N / *COMMAND AND CONTROL*	Project (Number/Name) 9123 / *FORCEnet*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
9123: *FORCEnet*	246.062	2.141	2.218	2.237	-	2.237	0.000	0.000	0.000	0.000	0.000	252.658
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

FORCEnet Funding supports IW Portfolio Health Assessments (PHAs) of Navy mission areas and identifies gaps in Information Warfare (IW) capabilities in the context of assessed mission areas.

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

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: FORCEnet	2.141	2.218	2.237	0.000	2.237
Articles:	-	-	-	-	-
FY 2022 Plans: -Continue to expand upon System of Systems (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. -Continue to utilize and study Navy mission areas in support of System of Systems (SoS) engineering assessments identifying 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 2023 Base Plans: -Continue to expand on upon System of Systems (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. -Continue to utilize and study Navy mission areas in support of SoS engineering assessments identifying integration and interoperability gaps, trades, and solutions for sponsor related equities.					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 9123 / *FORCEnet*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
-Continue to identify Navy mission area gaps in Information Warfare (IW) capabilities to prioritize Science and Technology (S&T) efforts for future budget decisions. Continued to identify critical architectural dependencies that enable mission situational awareness, which is a key component of the Portfolio Health Assessments (PHAs). -Continue to package assessments to support sponsor decision-making processes. -Continue to assess trade space and solutions, ensuring Force level capability and System of Systems (SoS) integration and interoperability across areas of interest to stakeholders including OPNAV N2/N6, N9I, ASN RDA, NAVWAR, NAVIFOR, PEO C4I. -Maximize utility of analytic products by understanding each stakeholder and their specific needs to provide them with objective, focused, relevant, and useable analysis. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase of $0.019M between FY 2022 and FY 2023 is attributed to increased support required to identify critical Portfolio Health Assessment (PHA) architectural dependencies that enable mission situational awareness.					
Accomplishments/Planned Programs Subtotals	2.141	2.218	2.237	0.000	2.237

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 9123 / *FORCEnet*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development and Systems Engineering	Various	Various : Various	4.331	0.000		0.000		0.000		-		0.000	0.000	4.331	-
		Subtotal	4.331	0.000		0.000		0.000		-		0.000	0.000	4.331	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development and Logistics Support	Various	Various : Various	136.842	0.000		0.000		0.000		-		0.000	0.000	136.842	-
Information Warfare Roadmaps and Analysis	C/CPFF	Metron : Reston, VA	15.533	1.626	May 2021	1.738	May 2022	1.765	May 2023	-		1.765	0.000	20.662	Continuing
Information Warfare Roadmaps and Analysis	WR	NIWC PAC : San Diego, CA	3.752	0.515	May 2021	0.480	May 2022	0.472	May 2023	-		0.472	0.000	5.219	Continuing
Information Warfare Roadmaps and Analysis	C/CPFF	BAH : McLean, VA	0.651	0.000		0.000		0.000		-		0.000	0.000	0.651	-
		Subtotal	156.778	2.141		2.218		2.237		-		2.237	0.000	163.374	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Accelerating Joint Warfighting Capability	Various	Various : Various	77.271	0.000		0.000		0.000		-		0.000	0.000	77.271	-
		Subtotal	77.271	0.000		0.000		0.000		-		0.000	0.000	77.271	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 9123 / *FORCEnet*

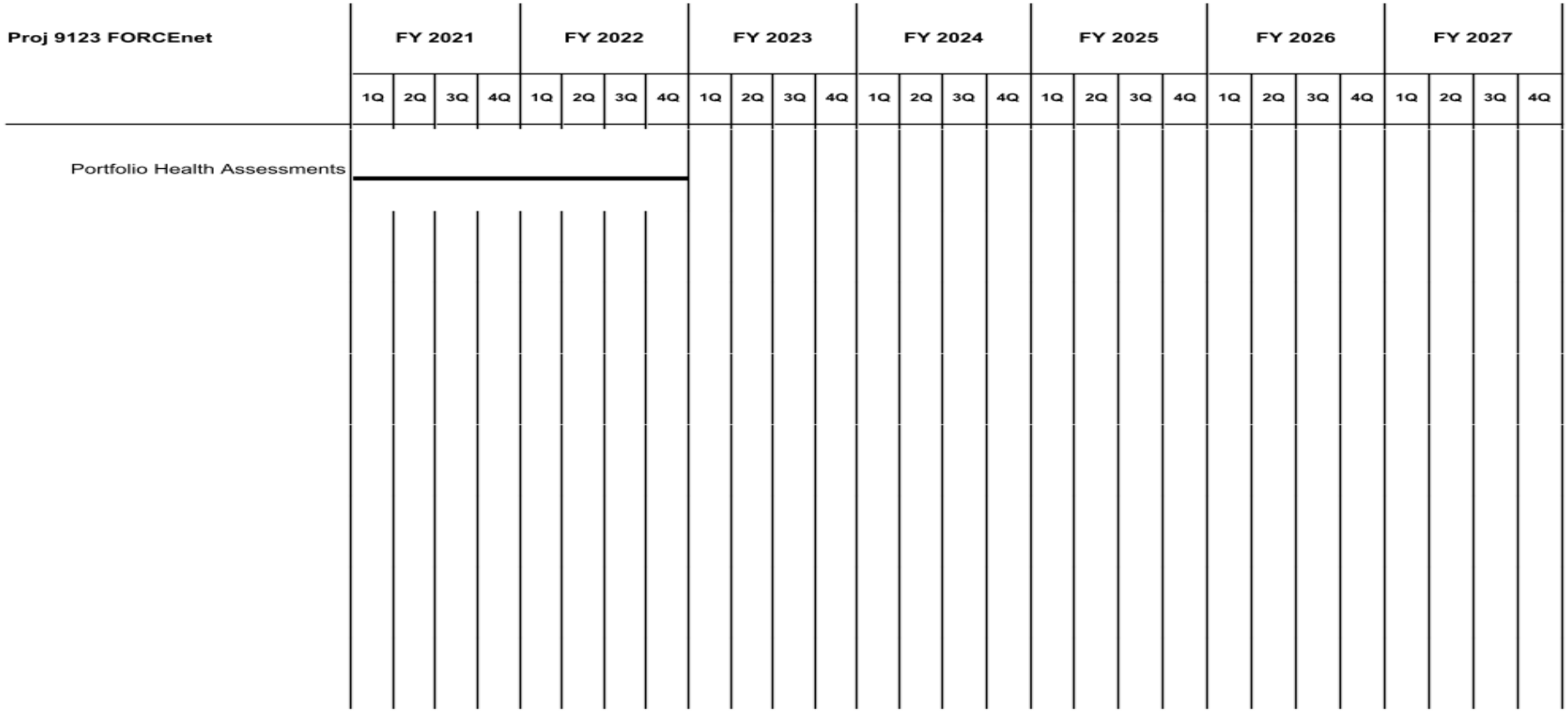
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Technical Support	Various	Various : Various	7.682	0.000		0.000		0.000		-		0.000	0.000	7.682	-
		Subtotal	7.682	0.000		0.000		0.000		-		0.000	0.000	7.682	N/A

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	246.062	2.141		2.218		2.237		-		2.237	0.000	252.658	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 9123 / *FORCEnet*



2023OSD - 0604231N - 9123 COMMAND AND CONTROL NAVY

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604231N / *COMMAND AND CONTROL*	**Project (Number/Name)** 9123 / *FORCEnet*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9123 FORCEnet				
Portfolio Health Assessments: Portfolio Health Assessments	1	2021	4	2022