Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604373N *I Airborne Mine Countermeasures*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	71.954	10.488	10.861	10.881	-	10.881	-	-	-	-	-	-
4026: *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*	62.756	9.593	9.912	9.924	-	9.924	-	-	-	-	-	-
9179: *Surf Navy Integ Undersea Tactical Tech*	9.198	0.895	0.949	0.957	-	0.957	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Airborne Mine Countermeasures (AMCM) Program Element (PE) provides resources to develop an advanced Mine Countermeasures (MCM) system to counter known and projected mine threats, as well as to develop post mission analysis software, integrated tactics and tactics training for mine warfare operations, and post mission analysis proficiency training.

The MCM systems provide mobile, quick reaction forces capable of land or sea-based minehunting and minesweeping operations worldwide. Resources are for developing and deploying advanced mine-sweeping systems and the intelligence and oceanographic capabilities that will enable mine warfare superiority. Tactics and techniques used vary across a diversity of environments and threats, including both asymmetric and emerging.

Resources provide for systems and support of mine warfare systems and expeditionary systems to allow for continuous operations of the Navy's warships and support vessels, other military vessels, and commercial vessels. Core capabilities include forward presence, deterrence, sea control, power projection, maritime security, humanitarian assistance and disaster response to maintain freedom of the seas. Capability improvements include reducing post-mission analysis time, reducing detect, classify, and identify decision time, improving neutralization time, improving network communications, automatic target recognition, and achieving in-stride detect-to-engage capability. Concept of operations includes development of cooperative, modular systems with a common post mission analysis system providing advanced tools to automate the complex problem of contact management for the thousands of recorded detections, the establishment of capable networked command and control systems, and standing up an accurate and interactive environmental system with the ability to form and disseminate a Common Environmental Picture. Efforts benefit the MCM force by transforming the Navy from the platform-centered legacy set of systems to a capability-centered force that is distributed, networked, and able to provide unique maritime influence and access across the entire maritime domain. The Airborne Mine Countermeasures (AMCM) programs will provide detection, classification, localization, identification, neutralization, influence sweep, and post mission analysis capabilities. This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA).

Project 4026 Strat Into Medal, Tactics & Trng Organic Force has been renamed Net-Centric Sensor Analysis for Mine Warfare (NSAM). This project element also includes the Integrated Tactics project.

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604373N *I Airborne Mine Countermeasures*

NSAM is the next generation post mission analysis (PMA) system which will replace the Organic Post Mission Analysis (OPMA) system. NSAM will achieve Initial Operational Capability (IOC) in FY2022. NSAM will be the single tactical and environmental PMA system for all Mine Warfare (MIW) sensor data and will provide integrated contact management capabilities. NSAM creates a collaborative, multi-data set, multi-user environment with the goal of reducing the mission timeline and increasing the mission effectiveness. NSAM is designed with an extensible architecture, to ease integration of additional sensors and advanced algorithms. Additionally, NSAM includes embedded contact recognition training.

The Integrated Tactics project develops MIW tactics across multiple MCM communities. The project develops new tactics theory for emerging systems and operations and Fleet tactics training. Theory and tactics are documented and published into doctrine for Fleet users.

Project 9179, Surface Navy Integrated Undersea Tactical Technology (SNIUTT) is a software tool which provides contact recognition training modules for Mine Countermeasures (MCM) sensor systems and runs as a plug-in to existing PMA systems.

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	10.916	10.909	11.092	-	11.092
Current President's Budget	10.488	10.861	10.881	-	10.881
Total Adjustments	-0.428	-0.048	-0.211	-	-0.211
• Congressional General Reductions	-	-0.048			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.428	0.000			
• Rate/Misc Adjustments	0.000	0.000	-0.211	-	-0.211

Change Summary Explanation

Program Adjustments:
FY20: -$428k SBIR reduction
FY21: -$48k misc rate adjustment
FY22: -$211k misc rate adjustment

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy												Date: May 2021
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604373N / *Airborne Mine Countermeasures*				Project (Number/Name) 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*			
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
4026: *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*	62.756	9.593	9.912	9.924	-	9.924	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project 4026 Strat Into Medal, Tactics & Trng Organic Force has been renamed Net-Centric Sensor Analysis for Mine Warfare (NSAM). This project element also includes the Integrated Tactics project.

Organic Post Mission Analysis (OPMA) provides post mission analysis (PMA) capabilities for the Airborne Laser Mine Detection System (ALMDS) and the Airborne Mine Neutralization System (AMNS); OPMA also contains a separate module for contact management. NSAM will be the replacement for OPMA and will achieve Initial Operational Capability (IOC) in FY2022. NSAM will be the single tactical and environmental PMA system for all Mine Warfare (MIW) sensor data and will provide integrated contact management capabilities. NSAM creates a collaborative, multi-data set, multi-user environment with the goal of reducing the mission timeline and increasing the mission effectiveness. NSAM is designed with an extensible architecture, to ease integration of additional sensors and advanced algorithms. Additionally, NSAM includes embedded contact recognition training.

NSAM will be developed in incremental builds; efforts in FY2020 added contact management for the AN/AQS-20C sensors (B1.1); FY2021 begins UISS contact management (B1.2) and full AN/AQS-20C PMA integration (B1.3); FY20-21 also include updates to address emerging requirements for the MCM Mission Package IOT&E; FY2022 efforts will complete UISS contact management and continue AN/AQS-20C PMA integration. Future incremental builds will add support for additional mine countermeasures (MCM) sensor weapons systems. Additionally, NSAM will implement cybersecurity requirements by following the Risk Management Framework (RMF) process.

The Integrated Tactics project develops MIW tactics across multiple MCM communities. The project develops new tactics theory for emerging systems and operations and Fleet tactics training. Theory and tactics are documented and published into doctrine for Fleet users.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**
Title: NSAM Product Development	6.802	7.099	7.090	0.000	7.090
Articles:	-	-	-	-	-
FY 2021 Plans: Complete B1.1.2 compatibility updates for Red Hat Linux 7 (RHEL 7) operating system, which will be used in the MCM Mission Package initial operational test and evaluation event. Complete requirements package for B1.3,					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
AN/AQS-20C PMA. Start software development based on the requirements package for B1.3, AN/AQS-20C PMA integration. Begin developing requirements package, for B1.2, UISS contact management. Generate vulnerability data for five additional mines against 13 classes of ships and draft new chapters to add this vulnerability data to the Navy Tactical Reference Publication (NTRP) 3-15.2.2 Susceptibility of Ships to Threat Mines. Develop threat-specific tactics and procedures against Fleet validated threat list, including threat specific tactics for planning against specific mine types with existing functionality in MINEnet Tactical in FY2021. Support tactics training needs for the LCS MCM mission package and MIW Staffs by developing wargame scenarios and conducting wargames. ***FY 2022 Base Plans:*** Continue NSAM software development based on the requirements package for B1.3 AN/AQS-20C PMA. Complete software development for B1.2 UISS contact management. Publish the new chapters of the Navy Tactical Reference Publication (NTRP) 3-15.2.2 Susceptibility of Ships to Threat Mines, which include the vulnerability data generated for the five mines in FY2021. Generate vulnerability data for four additional mines against the same 13 ship classes and draft four new chapters of NTRP 3-15.2.2. Develop tactical memorandum to document threat-specific tactics and procedures against Fleet validated threat list. Support tactics training needs for the LCS MCM mission package and MIW Staffs by developing wargame scenarios and conducting wargames. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** No significant change.					
Title: Engineering Services/ILS:	1.621	1.952	1.947	0.000	1.947
Articles:	-	-	-	-	-
FY 2021 Plans: Perform systems engineering tasks such as configuration management of system requirements, engineering change proposals, managing trouble observation report (TORs), ticket backlogs, and cybersecurity tasks to					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
support B1.2 UISS contact management and B1.3 AN/AQS-20C PMA development. Complete the B1.2 UISS contact management build development package (BDP). Complete the B1.3 AN/AQS-20C PMA BDP. Continue applying Risk Management Framework (RMF) guidelines and implement continuous monitoring strategy, adhering to the authority to operate (ATO) requirements. Develop and update documentation required for a Milestone B decision. Develop initial documentation and establish in-service engineering agent (ISEA) and software support activity (SSA) in preparation for NSAM Initial Operational Capability (IOC). Complete initial NSAM training curriculum and updates to required logistics documents. Prepare required documentation and briefs for IOC. ***FY 2022 Base Plans:*** Perform systems engineering tasks such as configuration management of system requirements, managing trouble observation report (TORs), ticket backlogs, and cybersecurity tasks to support B1.2 UISS contact management and B1.3 AN/AQS-20C PMA development. Continue applying RMF guidelines and implement continuous monitoring strategy adhering to the ATO requirements. Prepare NSAM training curriculum updates for B1.2. Finalize documentation required for Milestone B decision. Attain NSAM IOC. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** No significant change.					
Title: Test and Evaluation	0.845	0.519	0.526	0.000	0.526
Articles:	-	-	-	-	-
FY 2021 Plans: Complete testing and deliver B1.1.1; this build includes additional AN/AQS-20C contact management functionality. Conduct NSAM B1.1.2 testing and deliver to the LCS mission package application software (MPAS) team. ***FY 2022 Base Plans:*** Develop NSAM B1.2 UISS contact management test procedures and support quarterly engineering deliveries to the LCS mission package application software lab. ***FY 2022 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** No significant change.					
Title: Management Support	0.325	0.342	0.361	0.000	0.361
Articles:	-	-	-	-	-
FY 2021 Plans: Continue to plan, track, follow-up and report on cost, schedule and performance status. Oversight of financial and logistics efforts. Coordination with Navy and other DoD organizations as required to ensure successful execution of the program. Communicate and coordinate on program office tasking to include briefings, demonstrations, project planning, and project status as required. Continue to prepare and oversee development of documentation for NSAM Milestone B and IOC. ***FY 2022 Base Plans:*** Continue to plan, track, follow-up and report on cost, schedule and performance status. Oversight of financial and logistics efforts. Coordination with Navy and other DoD organizations as required to ensure successful execution of the program. Communicate and coordinate on program office tasking to include briefings, demonstrations, project planning, and project status as required. Conduct NSAM Milestone B, as an acquisition category IV-monitor program and close-out actions following the Milestone B review. Attain IOC. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** No significant growth in Management Services scope. Slight increase reflects labor escalation.					
Accomplishments/Planned Programs Subtotals	9.593	9.912	9.924	0.000	9.924

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*

D. Acquisition Strategy

The NSAM project is executed by government-led teams at Naval Surface Warfare Center (NSWC) Panama City Division (PCD) and Naval Research Laboratory - Stennis Space Center (NRL-SSC), with additional services provided by contractor support labor. NSAM is currently a pre-acquisition category IV-monitor program and plans to enter the acquisition process at Milestone B. NSAM will follow the DoD acquisition model for incrementally deployed software-intensive systems.

The Integrated Tactics project is executed by a government team at NSWC PCD.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Development	WR	NSWC PCD : Panama City FL	32.352	3.962	Oct 2019	4.259	Oct 2020	4.281	Oct 2021	-		4.281	-	-	-
Hardware/Software Development	WR	NRL-SSC : Bay St. Louis, MS	4.041	2.475	Oct 2019	2.475	Oct 2020	2.444	Oct 2021	-		2.444	-	-	-
Hardware/Software Development	C/CPFF	Various: NSWC PC : Panama City, FL	0.000	0.365	Oct 2019	0.365	Oct 2020	0.365	Oct 2021	-		0.365	-	-	-
		Subtotal	36.393	6.802		7.099		7.090		-		7.090	-	-	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Logistics Support	C/CPFF	NSWC PCD : Various	0.040	0.440	Oct 2019	0.440	Oct 2020	0.440	Oct 2021	-		0.440	-	-	-
Engineering and Logistics Support	WR	NSWC PCD : Not Specified	15.540	1.181	Oct 2019	1.512	Oct 2020	1.507	Oct 2021	-		1.507	-	-	-
Engineering and Logistics Support	WR	NRL-SSC : Bay St. Louis, MS	1.409	0.000		0.000		0.000		-		0.000	-	-	-
ILS	WR	NSWC PC : Panama City FL	3.505	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	20.494	1.621		1.952		1.947		-		1.947	-	-	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NSAM Test and Evaluation	WR	NSWC PC : Panama City, FL	2.683	0.423	Oct 2019	0.421	Oct 2020	0.260	Oct 2021	-		0.260	-	-	-
NSAM Test and Evaluation	WR	NRL-SSC : Bay St Louis, MS	0.647	0.000		0.000		0.000		-		0.000	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NSAM Test & Evaluation	WR	JHU-APL : Laurel, MD	0.000	0.258	Oct 2019	0.098	Oct 2020	0.102	Oct 2021	-		0.102	-	-	-
NSAM Test and Evaluation	C/CPFF	NSWC PC : Various	0.000	0.164	Oct 2019	0.000		0.164	Oct 2021	-		0.164	-	-	-
		Subtotal	3.330	0.845		0.519		0.526		-		0.526	-	-	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Support	WR	NSWC PC : Panama City FL	2.526	0.295	Oct 2019	0.342	Oct 2020	0.361	Oct 2021	-		0.361	-	-	-
Acquisition Workforce Fund	Various	Various : Various	0.013	0.030	Oct 2019	0.000		0.000		-		0.000	-	-	-
		Subtotal	2.539	0.325		0.342		0.361		-		0.361	-	-	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	62.756	9.593		9.912		9.924		-		9.924	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*

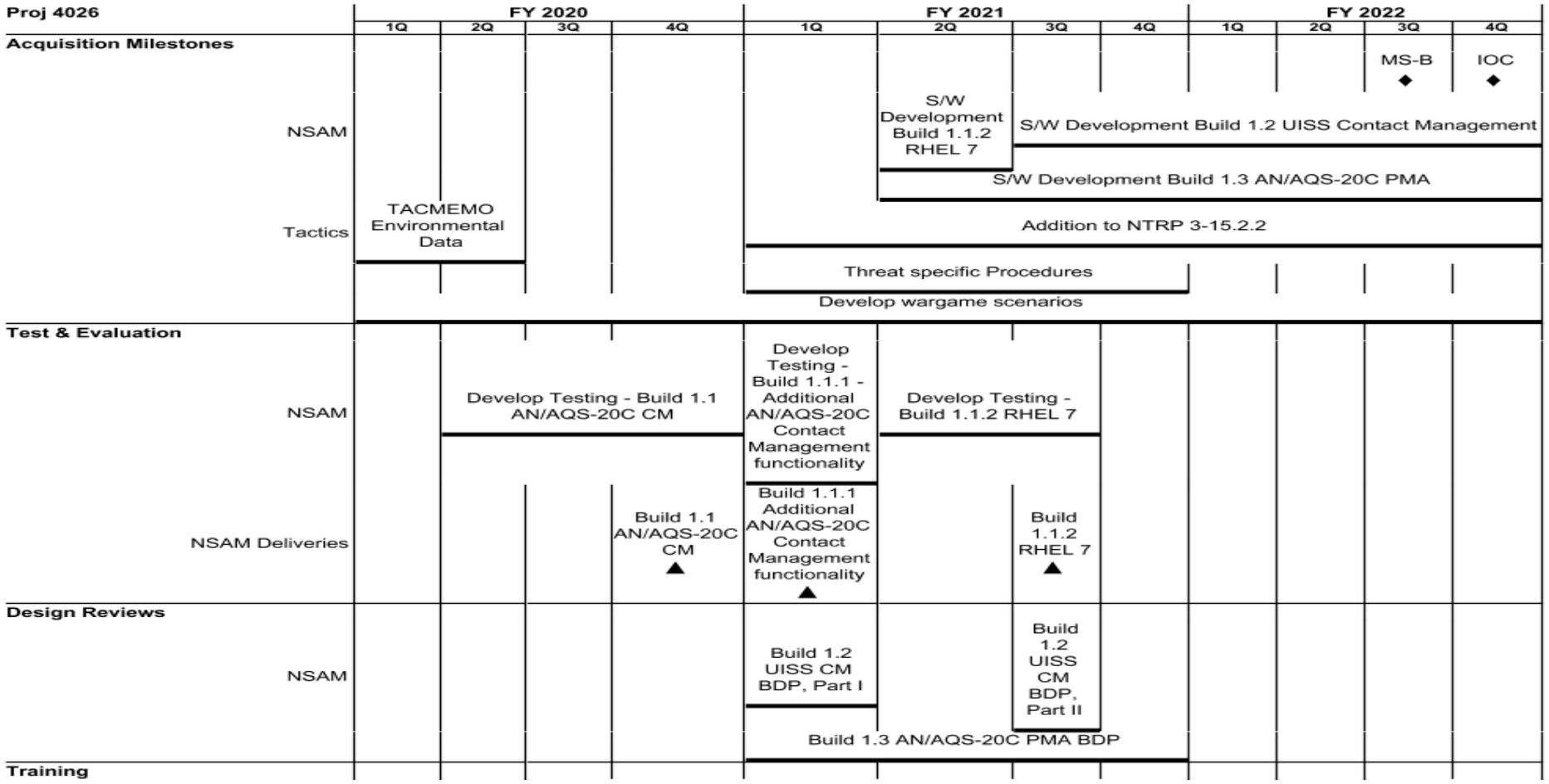
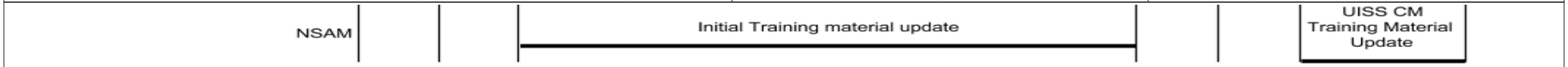


Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*



2022PB - 0604373N - 4026

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 4026				
Acquisition Milestones: NSAM: Milestone B	3	2022	3	2022
Acquisition Milestones: NSAM: Initial Operational Capability	4	2022	4	2022
Acquisition Milestones: NSAM: S/W Development Build 1.1.2 RHEL 7	2	2021	2	2021
Acquisition Milestones: NSAM: S/W Development Build 1.2 UISS Contact Management	3	2021	4	2022
Acquisition Milestones: NSAM: S/W Development Build 1.3 AN/AQS-20C PMA	2	2021	4	2022
Acquisition Milestones: Tactics: New chapters with vulnerability data for additional mines for NTRP 3-15.2.2 susceptibility of Shite to Threat mines	1	2021	4	2022
Acquisition Milestones: Tactics: TACMEMO Environment Data for LCS MCM Systems	1	2020	2	2020
Acquisition Milestones: Tactics: Threat specific Tactics and Procedures against specific mine types with existing functionality in MINEnet Tactical	1	2021	4	2021
Acquisition Milestones: Tactics: Develop wargame scenarios and conduct wargames for LCS MCM Mission Package and MIW staffs	1	2020	4	2022
Test & Evaluation: NSAM: Developmental Testing Build 1.1 AN/AQS-20C Contact Management	2	2020	4	2020
Test & Evaluation: NSAM: Developmental Testing Build 1.1.1 - Additional AN/AQS-20C Contact Management functionality	1	2021	1	2021
Test & Evaluation: NSAM: Developmental Testing Build 1.1.2 RHEL 7	2	2021	3	2021
Test & Evaluation: NSAM Deliveries: Build 1.1 AN/AQS-20C Contact Management	4	2020	4	2020
Test & Evaluation: NSAM Deliveries: Build 1.1.1 - Additional AN/AQS-20C Contact Management functionality	1	2021	1	2021
Test & Evaluation: NSAM Deliveries: Build 1.1.2 RHEL 7	3	2021	3	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 4026 / *Net-Centric Sensor Analysis for Mine Warfare (NSAM)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Design Reviews: NSAM: Build 1.2 UISS Contact Management Build Development Package (BDP), Part I	1	2021	1	2021
Design Reviews: NSAM: Build 1.2 UISS Contact Management Build Development Package (BDP), Part II	3	2021	3	2021
Design Reviews: NSAM: Build 1.3 AN/AQS-20C PMA BDP	1	2021	4	2021
Training: NSAM: Initial Training material update	3	2020	4	2021
Training: NSAM: Build 1.2 UISS CM Training Material Update	3	2022	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604373N / *Airborne Mine Countermeasures*				Project (Number/Name) 9179 / *Surf Navy Integ Undersea Tactical Tech*			
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
9179: *Surf Navy Integ Undersea Tactical Tech*	9.198	0.895	0.949	0.957	-	0.957	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Surface Navy Integrated Undersea Tactical Technology (SNIUTT) is a software tool which provides contact recognition training modules for Mine Countermeasures (MCM) sensor systems, which is a perishable skill. and runs as a plug-in to existing PMA systems; this implementation also serves to reinforce training PMA procedures. Contact recognition is a perishable skill. The SNIUTT training modules include skills and refresher/proficiency training; the contact recognition training focuses on detection, classification, and identification of mine-like contacts. SNIUTT training modules run as plug-ins on existing PMA systems and are used both in the classroom and at the squadrons. SNIUTT software training modules are customized based on Fleet-user needs for a specific weapons system. SNIUTT training modules are available for the following systems: 1) Common Post Mission Analysis (CPMA) for AN/AQS-24B; 2) Coastal Battlefield Reconnaissance and Analysis (COBRA) PMA for COBRA sensors; 3) Organic Post Mission Analysis (OPMA) for ALMDS and the Contact Management Tool; and 4) Net-centric Sensor Analysis for Mine Warfare (NSAM) PMA system for ALMDS.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Engineering and Logistics Support	0.317	0.330	0.336	0.000	0.336
Articles:	-	-	-	-	-
FY 2021 Plans: Perform systems engineering tasks such as developing high-level and derived requirements for SNIUTT v1.3.3 and SNIUTT v1.3.4 software versions, configuration management of system requirements, engineering change proposals, managing ticket backlogs, and continue applying risk management framework guidelines and implement continuous monitoring strategy, adhering to the authority to operate requirements. Continue to maintain and update the current online source code repository and SNIUTT requirements and documents.					
FY 2022 Base Plans: Perform systems engineering tasks such as developing high-level and derived requirements for SNIUTT v1.3.4 and v1.3.5 software products, configuration management of system requirements, engineering change proposals, managing ticket backlogs, and continue applying risk management framework guidelines and implement continuous monitoring strategy, adhering to the authority to operate requirements. Continue to maintain and update the current online source code repository and SNIUTT requirements and documents.					
FY 2022 OCO Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 9179 / *Surf Navy Integ Undersea Tactical Tech*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** No significant growth in Engineering, and Logistics Support. Slight increase reflects labor escalation.					
Title: Product Development	0.578	0.619	0.621	0.000	0.621
Articles:	-	-	-	-	-
FY 2021 Plans: Continue software development of SNIUTT v1.3.3, which includes COBRA PMA module updates and new capability for CPMA for the AN/AQS-24C sensor system. Develop test cases and follow a test-fix-test process on beta builds for SNIUTT v1.3.3; provide updated beta build to tactics teams for validation. Provide test results and generate test reports. ***FY 2022 Base Plans:*** Conduct software development for the next build of SNIUTT, v1.3.4, which includes NSAM for integrated contact management and will begin modules for NSAM for the AN/AQS-20C system. Develop test cases and follow a test-fix-test process on beta builds for SNIUTT v1.3.4; provide updated beta build to tactics teams for validation. Provide test results and generate test reports. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** No significant growth in Product Development. Slight increase reflects labor escalation.					
Accomplishments/Planned Programs Subtotals	0.895	0.949	0.957	0.000	0.957

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Surface Navy Integrated Undersea Tactical Technology (SNIUTT) is executed by a government-led team at NSWC PCD.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604373N / *Airborne Mine Countermeasures*	Project (Number/Name) 9179 / *Surf Navy Integ Undersea Tactical Tech*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development	WR	NSWC PC : Panama City FL	7.872	0.578	Oct 2019	0.619	Oct 2020	0.621	Oct 2021	-		0.621	-	-	-
		Subtotal	7.872	0.578		0.619		0.621		-		0.621	-	-	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ISEA	WR	NSWC, PC : Panama City FL	1.323	0.317	Oct 2019	0.330	Oct 2020	0.336	Oct 2021	-		0.336	-	-	-
		Subtotal	1.323	0.317		0.330		0.336		-		0.336	-	-	N/A

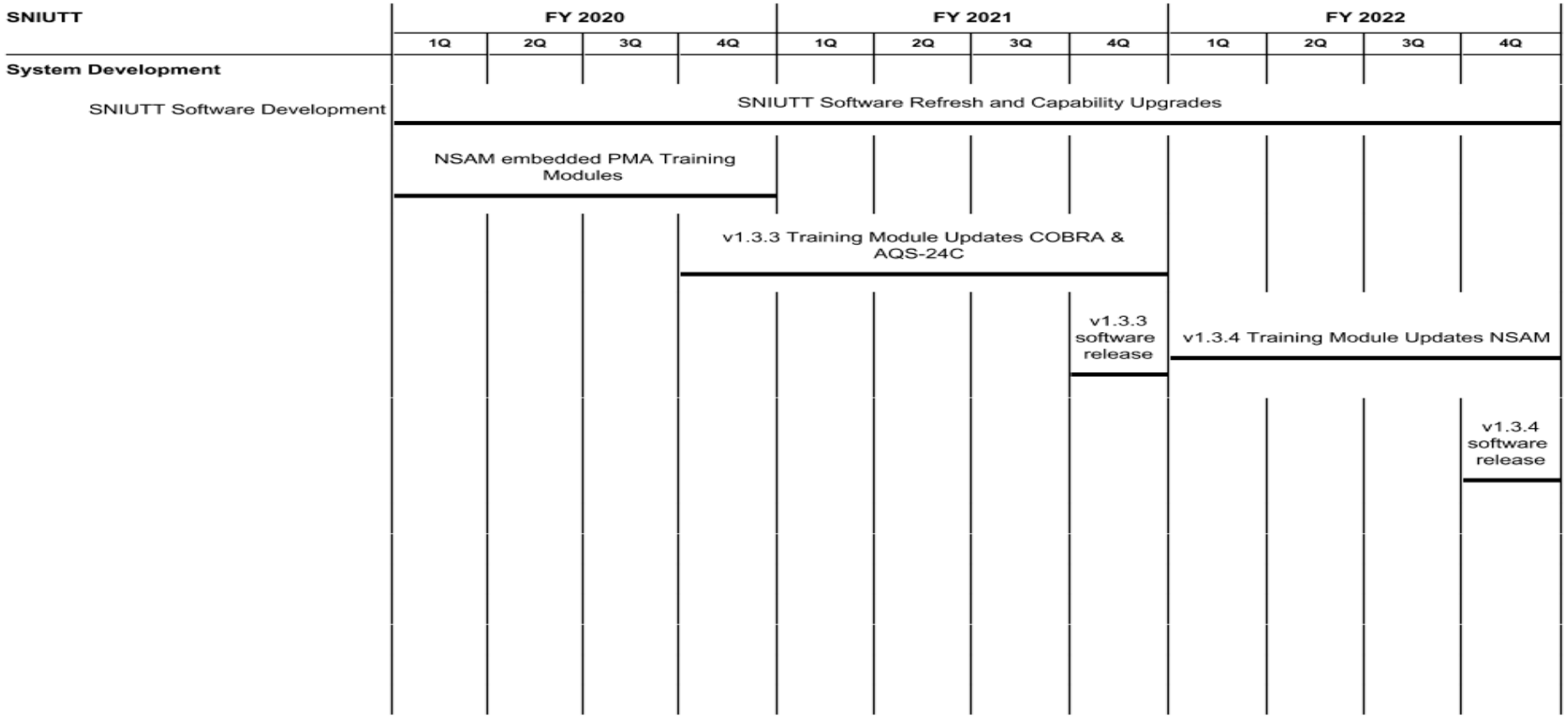
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DAWDF	Various	Various : Various	0.003	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	0.003	0.000		0.000		0.000		-		0.000	-	-	N/A

	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	9.198	0.895		0.949		0.957		-		0.957	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 9179 / *Surf Navy Integ Undersea Tactical Tech*



2022PB - 0604373N - 9179

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604373N / *Airborne Mine Countermeasures*	**Project (Number/Name)** 9179 / *Surf Navy Integ Undersea Tactical Tech*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
SNIUTT				
System Development: SNIUTT Software Development: SNIUTT Software Refresh and Capability Upgrades	1	2020	4	2022
System Development: SNIUTT Software Development: NSAM embedded PMA training modules	1	2020	4	2020
System Development: SNIUTT Software Development: v1.3.3 COBRA training module updates and new training modules for CPMA for AN/AQS-24C	4	2020	4	2021
System Development: SNIUTT Software Development: v1.3.3 software release	4	2021	4	2021
System Development: SNIUTT Software Development: v1.3.4 new training modules for NSAM integrated contact management	1	2022	4	2022
System Development: SNIUTT Software Development: v1.3.4 software release	4	2022	4	2022