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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305231N / MQ-8 UAV
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	623.557	33.543	27.000	29.700	-	29.700	23.264	0.000	0.000	0.000	52.484	789.548
2768: <i>MQ-8 Fire Scout</i>	623.557	26.543	0.000	29.700	-	29.700	23.264	0.000	0.000	0.000	52.484	755.548
9999: <i>Congressional Adds</i>	0.000	7.000	27.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	34.000

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 253

A. Mission Description and Budget Item Justification

The MQ-8 Unmanned Air System is a Joint Military Intelligence Program.

The MQ-8 Unmanned Air System (Fire Scout) program achieved MS C in June 2017. MQ-8C Unmanned Air System declared Initial Operational Capability in June 2019 for the Endurance Baseline and in June 2022 for the Surface Warfare (SUW) Increment. The program includes MQ-8B air vehicles (AV), MQ-8C air vehicles (AV), and associated Mission Control Systems (MCS), Unmanned Aerial Vehicle Common Automatic Recovery Systems (UCARS) and support equipment. The MQ-8B variant of Fire Scout completed Sundown on 30 Sep 2022. Currently, the MQ-8C is the only remaining airframe for the program of record that maintain a limited segment of air vehicles to support the Littoral Combat Ship (LCS) SUW missions and future Mine Counter Measures (MCM) missions.

The MQ-8C Fire Scout is a vertical take-off and landing, expeditionary, unmanned aircraft system (UAS) capable of day/night ship and shore-based operations. Fire Scout provides an airborne, unmanned, sea-based, persistent intelligence, surveillance, reconnaissance and targeting (ISR-T) asset to the host LCS platform or suitably equipped air capable ships (SEACS) without the reliance on limited joint theater or national assets. The MQ-8C Fire Scout system of systems includes the MCS, UCARS (required for shipboard only), and Tactical Common Data Link (TCDL) for MQ-8C command & control and payload data transmission.

The MQ-8 launches and recovers vertically and can operate from suitably equipped air capable ships (SEACS), as well as confined area land bases. Interoperability is achieved via the Tactical Control System (TCS) software in the MCS, also referred to as a Ground Control Station (GCS), and the TC DL. The data from the MQ-8 is provided through standard DoD Command, Control, Communications, Computers and ISR-T (C4ISR-T) system architectures and protocols.

A deployed MQ-8 system includes AVs, payloads (i.e. electro-optical/infrared/laser designator-range finder, Automated Identification System, voice communications relay, Radar, and other specialty payloads), Mission Control Systems (with TCS and TC DL integrated for interoperability), a UCARS for automatic launch and recovery, and associated spares and support equipment. The schedules for MCS and UCARS components are based on host ship requirements, while schedules for AV components, support equipment, and training equipment are based on operational deployment plans. A limited number of land-based mission control systems support shore-based operations including training, pre-deployment or acceptance functional check flights, and depot-level maintenance/post-maintenance activities. MQ-8 systems support missions on LCS, Expeditionary Mobile Base (T-ESB), FFG(X), and/or SEACS. Quantities of air vehicles are derived from LCS deployment requirements for SUW and MCM mission sets.

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B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	33.543	0.000	0.000	-	0.000
Current President's Budget	33.543	27.000	29.700	-	29.700
Total Adjustments	0.000	27.000	29.700	-	29.700
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	27.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	29.700	-	29.700

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 9999: *Congressional Adds*

Congressional Add: *Data bus cybersecurity*

Congressional Add: *Datalink networks and software automation*

Congressional Add Subtotals for Project: 9999

Congressional Add Totals for all Projects

	FY 2022	FY 2023
	7.000	7.000
	0.000	20.000
	7.000	27.000
	7.000	27.000

Change Summary Explanation

Funding: The FY 2024 request increased by \$29.700M since the previous President's Budget submission due to incorporating development efforts of Optical Sensor System, Datalink Network and Minotaur in support of six (6) additional MQ-8C Air Vehicles removed from long term preservation for future deployment aboard and additional five (5) LCS.

Schedule: Updates reflect current planned dates for the software development increments in order to account for latest Fleet operational needs. Additionally, the schedule was updated to reflect continuing engineering and manufacturing development related to Mine Counter Measures; LCS Integration; and Payload, Obsolescence, Software, and Analysis as well as Test and Evaluation of Specialty Payloads. The schedule was also updated to add engineering and manufacturing development related to new development efforts.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / MQ-8 UAV	Project (Number/Name) 2768 / MQ-8 Fire Scout
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2768: MQ-8 Fire Scout	623.557	26.543	0.000	29.700	-	29.700	23.264	0.000	0.000	0.000	52.484	755.548
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 253

A. Mission Description and Budget Item Justification

Funding is provided for development efforts in response to emerging fleet requirements through integration and improvements to Common Operational Picture (COP) capabilities, avionics, payloads, range, endurance, and targeting.

The MQ-8 Radar capability was the initial effort as part of the SUW Increment of the MQ-8C. A non-developmental maritime Radar was competitively selected and integrated into the MQ-8C Fire Scout System. The Radar provides the MQ-8 operators and the supported LCS, T-ESB and FFG(X) crew enhanced situational awareness of the Recognized Maritime Picture (RMP) by providing multiple operational modes to include surface search, track, Inverse Synthetic Aperture Radar (ISAR) maritime target classification, and Synthetic Aperture Radar (SAR) target classification capabilities. The maritime Radar is fully integrated with the Mission Control Systems (MCS) and ship's combat systems providing data in standardized format for ease of dissemination to other users. Integration of the Radar capability also includes integration of the Minotaur mission management software on both the AV and MCS.

Minotaur software was integrated as part of the Surface Warfare (SUW) Increment and provides the operator interface and command and control for the Radar, Electro-optical Infrared (EO/IR), and automatic information system (AIS) payloads and future mission payloads; map management; and sensor track correlation.

The MQ-8C data link network capability will disseminate sensor track data to other data link network participants contributing to the COP. Line-of-Sight (LOS) capability will connect Fleet users and disadvantaged users increasing situational awareness. Additionally, the data link network will be capable of passing weapons quality tracks and updates for Network Enabled Weapon Targeting (NEW-T) for Over-the-Horizon Targeting (OTH-T).

The optical sensor system will provide the MQ-8C the ability to land on ships during emissions control (EMCON) operations without requiring the use of UCARS, expanding the number of ships upon which the MQ-8C could land and mitigating reliability risks and operational risks with the UCARS system. The optical sensor system may also be utilized as part of a future due regard capability to detect potential air-to-air collision threats in time to react to them.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Hardware and System Development	11.575	0.000	25.256	0.000	25.256
Articles:	-	-	-	-	-
FY 2023 Plans: N/A					
FY 2024 Base Plans:					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>Hardware and Software Non-Recurring Engineering for integration of the optical sensor and datalink network capabilities for MQ-8C. Development of Cyber security updates to MQ-8C software including Minotaur</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: FY24 increase of \$25.256M provides support to LCS Aviation Detachments (AVDETs) for ship restoral and supports MQ-8 program wholeness.</p>					
<p>Title: Development/Operational Testing</p> <p align="right">Articles:</p> <p>FY 2023 Plans: N/A</p> <p>FY 2024 Base Plans: Developmental test planning and coordination for optical sensor and datalink capabilities.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: FY24 increase of \$0.500M provides government test and evaluation support to LCS AVDETs ship restoral for MQ-8 program wholeness.</p>	4.250	0.000	0.500	0.000	0.500
	-	-	-	-	-
<p>Title: Engineering and Technical Services</p> <p align="right">Articles:</p> <p>FY 2023 Plans: N/A</p> <p>FY 2024 Base Plans: Funding provided for engineering, program technical management, logistics support of the MQ-8C. Acquisition planning and execution for integration of optical sensor and datalink network capability. Evaluation of other payloads, LCS integration, and system studies and design.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p>	10.718	0.000	3.944	0.000	3.944
	-	-	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
FY24 increase of \$3.944M provides program management and government engineering support to LCS AVDETs ship restoral for MQ-8 program wholeness.					
Accomplishments/Planned Programs Subtotals	26.543	0.000	29.700	0.000	29.700

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APN/0443: MQ-8 UAV	49.249	0.000	1.546	-	1.546	6.752	0.000	0.000	0.000	0.000	1,435.548
• APN/0588: MQ-8 Series	31.566	9.846	14.700	-	14.700	23.262	10.371	10.593	10.845	5.714	278.910

Remarks

D. Acquisition Strategy

The Navy's acquisition strategy capitalizes on prior Rapid Deployment Capability efforts, while leveraging existing program investments. The current Program of Record (PoR) acquisition strategy supports the revised MQ-8C Capability Production Document (CPD). The maritime radar was competitively selected and integrated via prime contracts with TCS and the MQ-8 Fire Scout AV. The Minotaur integration and the optical sensor system efforts will use DoD contracts. The Data Link acquisition strategy is planned to integrate existing DoD datalink hardware and software on the MQ-8C via prime OEM contracts.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Primary Hardware Development (MQ-8)	SS/CPIF	Northrop Grumman Corp : San Diego, CA	378.000	0.000		0.000		0.000		-		0.000	0.000	378.000	378.000
Primary Hardware Development (MQ-8)	SS/CPIF	Raytheon Corp : Falls Church, VA	28.239	0.000		0.000		0.000		-		0.000	0.000	28.239	28.239
Primary Hardware Development (RADAR)	C/FP	Leonardo MW : Edinburgh, United Kingdom	10.821	0.000		0.000		0.000		-		0.000	0.000	10.821	10.821
Primary Hardware Development (Minotaur)	C/CPFF	John Hopkins University : Laurel, MD	7.293	0.000		0.000		0.000		-		0.000	0.000	7.293	7.293
Primary Hardware Development (Link-16)	SS/CPIF	Northrop Grumman : San Diego, CA	14.201	8.425	Sep 2022	0.000		0.000		-		0.000	0.000	22.626	24.365
Primary Hardware Development (Link-16)	SS/CPFF	Raytheon Corp : Falls Church, VA	3.470	1.100	Sep 2022	0.000		0.000		-		0.000	0.000	4.570	3.880
Primary Hardware Development (Link-16)	C/CPFF	John Hopkins University : Laurel, MD	1.000	1.500	Sep 2022	0.000		0.000		-		0.000	0.000	2.500	7.750
Primary Hardware Development (Link-16)	IA	GSA -VIA SAT : Washington, DC	1.000	0.550	Dec 2021	0.000		0.000		-		0.000	0.000	1.550	4.050
Primary Hardware Development (Minotaur)	TBD	TBD : TBD	0.000	0.000		0.000		1.570	Mar 2024	-		1.570	0.000	1.570	17.777
Primary Hardware Development (Minotaur)	SS/CPFF	Raytheon Corp : Falls Church, VA	0.000	0.000		0.000		0.230	Mar 2024	-		0.230	0.000	0.230	2.700
Primary Hardware Development (Minotaur)	SS/CPFF	Northrop Grumman Corp : San Diego, CA	0.000	0.000		0.000		1.310	Mar 2024	-		1.310	0.000	1.310	2.000
Primary Software Development	SS/CPFF	Northrop Grumman : San Diego, CA	0.000	0.000		0.000		2.800	Jan 2024	-		2.800	0.000	2.800	-
Primary Hardware Development (Datalink Network)	TBD	TBD : TBD	0.000	0.000		0.000		11.136	Jun 2024	-		11.136	0.000	11.136	-

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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Primary Hardware Development (Optical Sensor System)	SS/CPFF	SSCI : Woburn, MA	0.000	0.000		0.000		8.210	Dec 2023	-		8.210	0.000	8.210	-
Subtotal			444.024	11.575		0.000		25.256		-		25.256	0.000	480.855	N/A

Remarks
FY24 Product Development funding increase of \$25.256M provides support to LCS AVDETs for ship restoral and supports MQ-8 program wholeness.

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Integrated Logistics Support	Various	Various : Various	5.720	0.900	Dec 2021	0.000		0.266	Nov 2023	-		0.266	0.000	6.886	-
Subtotal			5.720	0.900		0.000		0.266		-		0.266	0.000	6.886	N/A

Remarks
FY24 ILS funding increase of \$0.266M provides support to LCS AVDETs for ship restoral and supports MQ-8 program wholeness.

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation (DT&E)	WR	NAWCAD : PAXRV, MD	37.359	3.500	Sep 2022	0.000		0.500	Nov 2023	-		0.500	0.000	41.359	-
Operational Test & Evaluation (OT&E)	WR	NAWC : Various	27.320	0.750	Nov 2021	0.000		0.000		-		0.000	0.000	28.070	-
Developmental Test & Evaluation (DT&E)	Various	Various : Various	1.646	0.000		0.000		0.000		-		0.000	0.000	1.646	-
Subtotal			66.325	4.250		0.000		0.500		-		0.500	0.000	71.075	N/A

Remarks
FY24 Test and Evaluation-DT&E increase of \$0.500M provides government test and evaluation support to LCS AVDETs ship restoral for MQ-8 program wholeness.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

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Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Engineering Support	WR	NAWCAD : PAXRV, MD	76.629	5.962	Dec 2021	0.000		2.796	Nov 2023	-		2.796	0.000	85.387	-
Program Management Support	Various	Various : Various	25.814	3.756	Dec 2021	0.000		0.832	Nov 2023	-		0.832	0.000	30.402	-
Travel	WR	NAVAIR : PAXRV, MD	2.588	0.100	Dec 2021	0.000		0.050	Nov 2023	-		0.050	0.000	2.738	-
Prior years Mgmt Svcs no longer funded in the FYDP	Various	Various : Various	2.457	0.000		0.000		0.000		-		0.000	0.000	2.457	-
Subtotal			107.488	9.818		0.000		3.678		-		3.678	0.000	120.984	N/A

Remarks
FY24 Management Service increase of \$3.678M provides program management, government engineering support, and travel to LCS AVDETs ship restoral for MQ-8 program wholeness.

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	623.557	26.543	0.000	29.700	-	29.700	0.000	679.800	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / MQ-8 UAV	Project (Number/Name) 2768 / MQ-8 Fire Scout
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Proj 2768	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Systems Development																												
Engineering and Manufacturing Development	Link 16																											
	Mine Counter Measures								Mine Counter Measures																			
	LCS Integration								LCS Integration																			
	Payload, Obsolescence, Software, and Analysis								Payload, Obsolescence, Software, and Analysis																			
	Software Inc 12.2				Software Inc 12.3				Software Inc 13.0																			
									Optical Sensor																			
									Datalink Network																			
Test & Evaluation (T&E)									Specialty Payloads																			

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2768				
Systems Development: Engineering and Manufacturing Development: Link 16	1	2022	3	2022
Systems Development: Engineering and Manufacturing Development: FY22 Mine Counter Measures	1	2022	4	2022
Systems Development: Engineering and Manufacturing Development: Mine Counter Measures	1	2024	4	2025
Systems Development: Engineering and Manufacturing Development: FY22 Littoral Combat Ship (LCS) Integration	1	2022	4	2022
Systems Development: Engineering and Manufacturing Development: Littoral Combat Ship (LCS) Integration	1	2024	4	2025
Systems Development: Engineering and Manufacturing Development: FY22 Payload, Obsolescence, Software, and Analysis	1	2022	4	2022
Systems Development: Engineering and Manufacturing Development: Payload, Obsolescence, Software, and Analysis	1	2024	4	2025
Systems Development: Engineering and Manufacturing Development: Software Increment 12.2	1	2022	3	2022
Systems Development: Engineering and Manufacturing Development: Software Increment 12.3	2	2023	1	2024
Systems Development: Engineering and Manufacturing Development: Software Increment 13.0	3	2023	3	2025
Systems Development: Engineering and Manufacturing Development: Optical Sensor System	1	2024	4	2025
Systems Development: Engineering and Manufacturing Development: Datalink Networks	1	2024	4	2025
Test & Evaluation (T&E): Specialty Payloads	1	2024	4	2025

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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
9999: <i>Congressional Adds</i>	0.000	7.000	27.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	34.000
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

FY23 Congressional Add funding provided for MQ-8C data bus cybersecurity, datalink network and software automation.

Cybersecurity is a mandatory requirement for C4ISR systems, and a data bus provides a medium for data and information exchange between all electronic systems within a weapon system - analogous to a Local Area Network (LAN), but for on-board internal electronic systems of a weapon system or platform. The data bus cybersecurity development effort will provide an integrated full-system cybersecurity solution inclusive of Intrusion Detection and Intrusion Prevention System (IDS/IPS) to legacy MIL-STD-1553 data buses on the MQ-8C Fire Scout.

The MQ-8C data link networks and software automation capability will disseminate Fire Scout Intelligence, Surveillance and Reconnaissance (ISR) data products and to provide increased data transfer rate between the AV and GCS to support transfer of the full Fire Scout ISR data set. Software automation efforts will reduce Air Vehicle Pilot (AVP)/Mission Payload Operator (MPO) workload by automating Naval Air Training and Operating Procedures Standardization (NATOPS) procedures such as air vehicle start, datalink configuration and link establishment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023
Congressional Add: Data bus cybersecurity	7.000	7.000
FY 2022 Accomplishments: Conduct market research, contract and acquisition planning, and release of data bus cybersecurity RFP. Initiate system specification development.		
FY 2023 Plans: Award data bus cybersecurity hardware NRE contract. Complete system specification development and conduct system requirements review and preliminary design review.		
Congressional Add: Datalink networks and software automation	0.000	20.000
FY 2022 Accomplishments: N/A		
FY 2023 Plans: Develop, test, and deliver a MQ-8C software build to reduce operator workload by automating procedures such as air vehicle start, datalink configuration and link establishment. Conduct trade studies to identify existing material solutions and integration approaches for a datalink network system. Conduct studies and prototype datalink network demonstration.		
Congressional Adds Subtotals	7.000	27.000

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C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Acquisition strategy for Data bus cybersecurity effort is planned to be sole source using DoD contracts. Acquisition strategy for data link networks and software automation is to utilize existing sole source DOD and prime OEM contracts.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / MQ-8 UAV	Project (Number/Name) 9999 / Congressional Adds
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Primary Hardware Development (Data Bus Cybersecurity)	SS/CPFF	Peraton Labs : Basking Ridge, NJ	0.000	6.257	May 2023	5.250	May 2023	0.000		-		0.000	0.000	11.507	7.000
Primary Hardware Development (Datalink)	C/CPFF	JHU/APL : Laurel, MD	0.000	0.000		0.125	Apr 2023	0.000		-		0.000	0.000	0.125	-
Primary Software Development (Datalink)	SS/CPIF	NGC : San Diego, CA	0.000	0.000		2.995	Apr 2023	0.000		-		0.000	0.000	2.995	-
Primary Software Development (Datalink)	SS/CPIF	Raytheon Corp : Falls Church, VA	0.000	0.000		0.175	Apr 2023	0.000		-		0.000	0.000	0.175	-
Primary Hardware Development (Datalink)	TBD	NGC : San Diego, CA	0.000	0.000		7.102	Apr 2024	0.000		-		0.000	0.000	7.102	-
Primary Hardware Development (Trade Study)	TBD	TBD : TBD: Not Specified	0.000	0.000		2.300	Apr 2023	0.000		-		0.000	0.000	2.300	-
Primary Hardware Development (Data Bus Cybersecurity)	SS/CPFF	NGC : San Diego, CA	0.000	0.000		1.000	Aug 2023	0.000		-		0.000	0.000	1.000	-
Subtotal			0.000	6.257		18.947		0.000		-		0.000	0.000	25.204	N/A

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation (DT&E)	Various	Various : Not Specified	0.000	0.000		4.010	Apr 2023	0.000		-		0.000	0.000	4.010	-
Subtotal			0.000	0.000		4.010		0.000		-		0.000	0.000	4.010	N/A

Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Engineering Support (Data Bus)	WR	NAWCAD : Patuxent River, MD	0.000	0.448	Oct 2022	0.550	Apr 2023	0.000		-		0.000	0.000	0.998	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / MQ-8 UAV	Project (Number/Name) 9999 / Congressional Adds
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Proj 9999	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Primary Hardware Development (Data Bus Cybersecurity)			Data Bus Cybersecurity																									
Primary Software Development					Datalink Network-S/W Automation																							

2024PB - 0305231N - 9999

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / MQ-8 UAV	Project (Number/Name) 9999 / Congressional Adds
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 9999				
Primary Hardware Development (Data Bus Cybersecurity): Data Bus Cybersecurity	3	2022	4	2023
Primary Software Development: Datalink Network-S/W Automation	2	2023	4	2024