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 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305231N *I MQ-8 UAV*							
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	594.589	28.968	33.543	0.000	-	0.000	0.000	0.000	0.000	0.000	26.242	683.342
2768: *MQ-8 Fire Scout*	594.589	28.968	26.543	0.000	-	0.000	0.000	0.000	0.000	0.000	26.242	676.342
9999: *Congressional Adds*	0.000	0.000	7.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7.000
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. The program includes MQ-8B air vehicles, MQ-8C air vehicles, and associated Mission Control Systems (MCS), Unmanned Aerial Vehicle Common Automatic Recovery Systems (UCARS) and support equipment. In addition to the air vehicles, Radar capabilities were developed under the Navy's Rapid Deployment Capability (RDC) authorities. All acquisition actions previously planned under the RDCs have transitioned into the Program of Record (POR).

The MQ-8 System provides real-time and non-real-time Intelligence, Surveillance and Reconnaissance (ISR) data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The baseline MQ-8 can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation and battle damage assessment including voice communications relay. Development efforts respond to emerging fleet requirements through integration and improvements to Common Operational Picture (COP) capabilities, avionics, payloads, range, endurance, and targeting.

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

A deployed MQ-8 system includes air vehicle(s), payloads (i.e. electro-optical/infrared/laser designator-range finder, Automated Identification System, voice communications relay, Radar, and other specialty payloads), MCS (with TCS and TCDL 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 air vehicle components, support equipment, and training equipment are based on operational deployment plans. A limited number of land-based mission control systems supplement the shipboard systems to support shore-based operations, such as pre-deployment or acceptance functional check flights. These land-based mission control stations will also support depot-level maintenance/post-maintenance activities. The MQ-8C provides additional mission endurance and payload-weight-power, increased reliability, and improved maintainability to the MQ-8 Fire Scout System. MQ-8 systems will support missions on Littoral Combat Ship (LCS), Expeditionary Mobile Base

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 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305231N *I MQ-8 UAV*

(T-ESB), FFG(X), and/or suitably-equipped air capable ships. Quantities of air vehicles are derived from LCS and/or suitably-equipped air capable ship deployment requirements for Surface Warfare (SUW) and Mine Countermeasures mission sets.

The MQ-8 Radar capability is the initial effort as part of the SUW Increment of the MQ-8C. A non-developmental maritime Radar has been competitively selected and integrated into the MQ-8C Fire Scout System. This system 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 Air Vehicle and MCS. Minotaur provides the Radar operator interface, command and control Electro-optical Infrared (EO/IR) payloads, map management, and sensor track correlation.

The MQ-8C Link-16 capability will disseminate sensor track data to other Link-16 participants contributing to the Common Operational Picture (COP). Line-of-Sight (LOS) capability will connect Fleet users and disadvantaged users increasing situational awareness. Additionally, the Link-16 In-Flight Target Update (IFTU) capability will allow for Network Enabled Weapon Targeting (NEW-T) for Over-the-Horizon Targeting (OTH-T). Minotaur software will be used to correlate sensor data and manage the Link-16 network.

Funding decrease identified within this budget submission reflect changes to the MQ-8 Fire Scout program. The program has implemented a partial divestiture and will maintain a limited segment of MQ-8C air vehicles to support LCS Mine Counter Measure (MCM) and Anti Surface Warfare (ASuW) missions.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	28.968	26.543	0.000	-	0.000
Current President's Budget	28.968	33.543	0.000	-	0.000
Total Adjustments	0.000	7.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	7.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	0.000	-	0.000

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: 9999: *Congressional Adds*		
Congressional Add: *Data bus cybersecurity*	0.000	7.000

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 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305231N *I MQ-8 UAV*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Congressional Add Subtotals for Project: 9999	0.000	7.000
Congressional Add Totals for all Projects	0.000	7.000

Change Summary Explanation

Funding decrease due to the program's partial divestiture. The program will maintain a limited segment of MQ-8C air vehicles to support LCS Mine Counter Measure (MCM) and Anti Surface Warfare (ASuW) missions.

Schedule: Updated delivery schedules for the current production plan.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy											Date: April 2022	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0305231N / *MQ-8 UAV*				Project (Number/Name) 2768 / *MQ-8 Fire Scout*			
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**
2768: *MQ-8 Fire Scout*	594.589	28.968	26.543	0.000	-	0.000	0.000	0.000	0.000	0.000	26.242	676.342
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 253

A. Mission Description and Budget Item Justification

Funding decreases identified within this budget profile reflects the removal of ongoing and future capability improvements starting in FY23. The Fire Scout program has undergoing a partial divestiture and will maintain a limited segment of MQ-8C air vehicles to support LCS Mine Counter Measure (MCM) and Anti Surface Warfare (ASuW) missions.

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. The program includes MQ-8B air vehicles, MQ-8C air vehicles, and associated Mission Control Systems (MCS), Unmanned Aerial Vehicle Common Automatic Recovery Systems (UCARS) and support equipment. In addition to the air vehicles, Radar and Weapons capabilities were developed under the Navy's Rapid Deployment Capability (RDC) authorities. All acquisition actions previously planned under the RDCs have transitioned into the Program of Record (POR).

The MQ-8 System provides real-time and non-real-time Intelligence, Surveillance and Reconnaissance (ISR) data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The baseline MQ-8 can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation and battle damage assessment including voice communications relay. Development efforts respond to emerging fleet requirements through integration and improvements to Common Operational Picture (COP) capabilities, avionics, payloads, range, endurance, and targeting.

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

A deployed MQ-8 system includes air vehicle(s), payloads (i.e. electro-optical/infrared/laser designator-range finder, Automated Identification System, voice communications relay, Radar, and other specialty payloads), MCS (with TCS and TCDL 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 air vehicle components, support equipment, and training equipment are based on operational deployment plans. A limited number of land-based mission control systems supplement the shipboard systems to support shore-based operations, such as pre-deployment or acceptance functional check flights. These land-based mission control stations will also support depot-level maintenance/post-maintenance activities. The MQ-8C provides additional mission endurance and payload-weight-power, increased reliability, and improved maintainability to the MQ-8 Fire Scout System. MQ-8 systems will support missions on Littoral Combat Ship (LCS), Expeditionary Mobile Base (T-ESB), FFG(X), and/or suitably-equipped air capable ships. Quantities of air vehicles are derived from LCS and/or suitably-equipped air capable ship deployment requirements for Surface Warfare(SUW)and Mine Countermeasures mission sets.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

The MQ-8 Radar capability is the initial effort as part of the Surface Warfare Increment of the MQ-8C. A non-developmental maritime Radar has been competitively selected for integration into the MQ-8C Fire Scout System. This system will provide the MQ-8 operators and the supported Littoral Combat Ship (LCS) 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 will be 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.

The MQ-8C Link-16 capability will disseminate sensor tack data to other Link-16 participants contributing to the Common Operational Picture. This capability will connect Fleet users and disadvantaged users increasing situational awareness. Additionally, the Link-16 In-Flight Target Update (IFTU) capability will allow for Network Enabled Weapon Targeting (NEW-T) for Over-the-Horizon Targeting (OTH-T). Minotaur will be used to correlate sensor data and manage the Link-16 network.

The MQ-8C Weapons capability integration study evaluated weapons requirements outlined in the MQ-8C Capabilities Production Document (CPD). Weapons trade study was conducted to assess the mission effectiveness and potential impacts of adding candidate weapons systems to the MQ-8C Fire Scout in a SUW scenario. Additional trade studies have been conducted to analyze weapons platform integration, software architecture, stores management, and air vehicle structural requirements for addition of the MQ-8C Weapons 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: Hardware and System Development	10.654	11.575	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2022 Plans: Continue MQ-8C hardware, software modifications, other payload integration, cyber vulnerability closure and safety capability improvements such a backup landing system and collision avoidance systems Complete software build for Link-16 integration and FQT/SIT. Conduct MQ-8C Link-16 Critical Design Review (CDR).					
FY 2023 Base Plans: N/A					
FY 2023 OCO Plans: N/A					
FY 2022 to FY 2023 Increase/Decrease Statement: Funding decrease reflects changes to the MQ-8 Fire Scout program. The program has implemented a partial divestiture and will maintain a limited segment of MQ-8C air vehicles to support LCS Mine Counter Measure (MCM) and Anti Surface Warfare (ASuW) missions.					
Title: Development/Operational Testing	8.901	4.250	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

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: Continue MQ8-C developmental testing of hardware and software modifications and planning for other payload integration. Finalize the operational testing for Radar on the MQ8-C and commence planning for the MQ-8C Link-16 developmental test. ***FY 2023 Base Plans:*** N/A ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding decrease reflects changes to the MQ-8 Fire Scout program. The program has implemented a partial divestiture and will maintain a limited segment of MQ-8C air vehicles to support LCS Mine Counter Measure (MCM) and Anti Surface Warfare (ASuW) missions.					
Title: Engineering and Technical Services	9.413	10.718	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2022 Plans: Initiate acquisition planning and execution of the MQ-8C Radar. Engineering support will continue to be required as the design is completed but work is still being done to support test efforts. LINK16 support will be required for PDR as the design matures. ***FY 2023 Base Plans:*** N/A ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funding decrease reflects changes to the MQ-8 Fire Scout program. The program has implemented a partial divestiture and will maintain a limited segment of MQ-8C air vehicles to support LCS Mine Counter Measure (MCM) and Anti Surface Warfare (ASuW) missions.					
Accomplishments/Planned Programs Subtotals	28.968	26.543	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

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
• APN/0443: *MQ-8 UAV*	34.759	49.249	0.000	-	0.000	0.000	0.000	0.000	0.000	67.114	1,494.364
• APN/0605: *MQ-8 UAV Spares*	2.056	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	15.939	17.995
• APN/0588: *MQ-8 Series*	28.704	31.624	9.373	-	9.373	9.560	9.748	9.941	10.139	6.002	249.670

Remarks

D. Acquisition Strategy

The Navy's acquisition strategy capitalizes on prior Rapid Deployment Capability efforts, while leveraging existing program investments. The acquisition strategy maintains commonality of MQ-8B and MQ-8C systems, payloads, avionics, software, and ancillary equipment where possible. The acquisition strategy supports the revised Capability Production Document. Initial Operational Capability (IOC) of an MQ-8B-based system was achieved in 2QFY14. IOC of an MQ-8C-based system onboard Littoral Combat Ship (LCS) was achieved in 3QFY19. The maritime Radar has been competitively selected. The integration effort will require sole source contracts to the current prime Original Equipment Manufacturers (OEM) for the Tactical Control System (TCS) and the MQ-8 Fire Scout air vehicle. The Link-16 effort will require sole source contracts to the current OEM for the TCS, Link-16 J-series Message Implementation Plan, and the MQ-8 Fire Scout air vehicle. Existing Department of Defense contracts will be leveraged for Link-16 Terminal, Minotaur, and peripheral procurements.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / *MQ-8 UAV*	Project (Number/Name) 2768 / *MQ-8 Fire Scout*	

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 (MQ-8)	C/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)	C/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 OEM)	C/CPIF	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/BA	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)	C/CPIF	Northrop Grumman : San Diego, CA	4.500	9.701	Mar 2021	8.425	Dec 2021	0.000		-		0.000	0.000	22.626	24.365
Primary Hardware Development(Link-16)	C/CPIF	Raytheon Corp : Falls Church, VA	1.000	2.470	Feb 2021	1.100	Dec 2021	0.000		-		0.000	0.000	4.570	3.880
Primary Hardware Development(Link-16)	C/BA	John Hopkins University : Laurel, MD	1.000	0.000		1.500	Dec 2021	0.000		-		0.000	0.000	2.500	7.750
Primary Hardware Development(Link-16)	IA	GSA -VIA SAT : Washington, DC	1.000	0.000		0.550	Dec 2021	0.000		-		0.000	0.000	1.550	4.050
Primary Hardware Development(EW/PT)	C/CPIF	Northrop Grumman : San Diego, CA	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	17.777
Primary Hardware Development(EW/PT	C/CPIF	Raytheon Corp : Falls Church, VA	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	2.700
Primary Hardware Development(EW/PT	C/CPIF	Johns Hopkins/APL : Laurel, MD	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	2.800
Primary Hardware Development(EW/PT	C/FFP	TBD : TBD	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	2.000
		Subtotal	431.853	12.171		11.575		0.000		-		0.000	0.000	455.599	N/A

Remarks

The program's partial divestiture removes previously planned capability improvements starting in FY23.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / *MQ-8 UAV*	Project (Number/Name) 2768 / *MQ-8 Fire Scout*	

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
Integrated Logistics Support	Various	Various : Various	5.505	0.215	Dec 2020	0.900	Dec 2021	0.000		-		0.000	0.000	6.620	-
		Subtotal	5.505	0.215		0.900		0.000		-		0.000	0.000	6.620	N/A

Remarks

The program's partial divestiture removes support previously planned capability improvements starting in FY23.

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	WR	NAWCAD : PAXRV, MD	35.829	1.530	Dec 2020	3.500	Dec 2021	0.000		-		0.000	0.000	40.859	-
Operational Test & Evaluation/QRA	WR	NAWC : Various	21.868	5.452	Nov 2020	0.750	Nov 2021	0.000		-		0.000	0.000	28.070	-
Prior Years T&E no longer funded in the FYDP	Various	Various : Various	1.646	0.000		0.000		0.000		-		0.000	0.000	1.646	-
		Subtotal	59.343	6.982		4.250		0.000		-		0.000	0.000	70.575	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
Government Engineering Support	WR	NAWCAD : PAXRV, MD	69.894	6.735	Dec 2020	5.962	Dec 2021	0.000		-		0.000	0.000	82.591	-
Program Management Support	Various	Various : Various	23.140	2.674	Dec 2020	3.756	Dec 2021	0.000		-		0.000	0.000	29.570	-
Travel	WR	NAVAIR : PAXRV, MD	2.397	0.191	Dec 2020	0.100	Dec 2021	0.000		-		0.000	0.000	2.688	-
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	97.888	9.600		9.818		0.000		-		0.000	0.000	117.306	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / *MQ-8 UAV*	Project (Number/Name) 2768 / *MQ-8 Fire Scout*	

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

Remarks

The program's partial divestiture removes management services requirements previously planned capability improvements starting 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	594.589	28.968		26.543		0.000		-		0.000	0.000	650.100	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

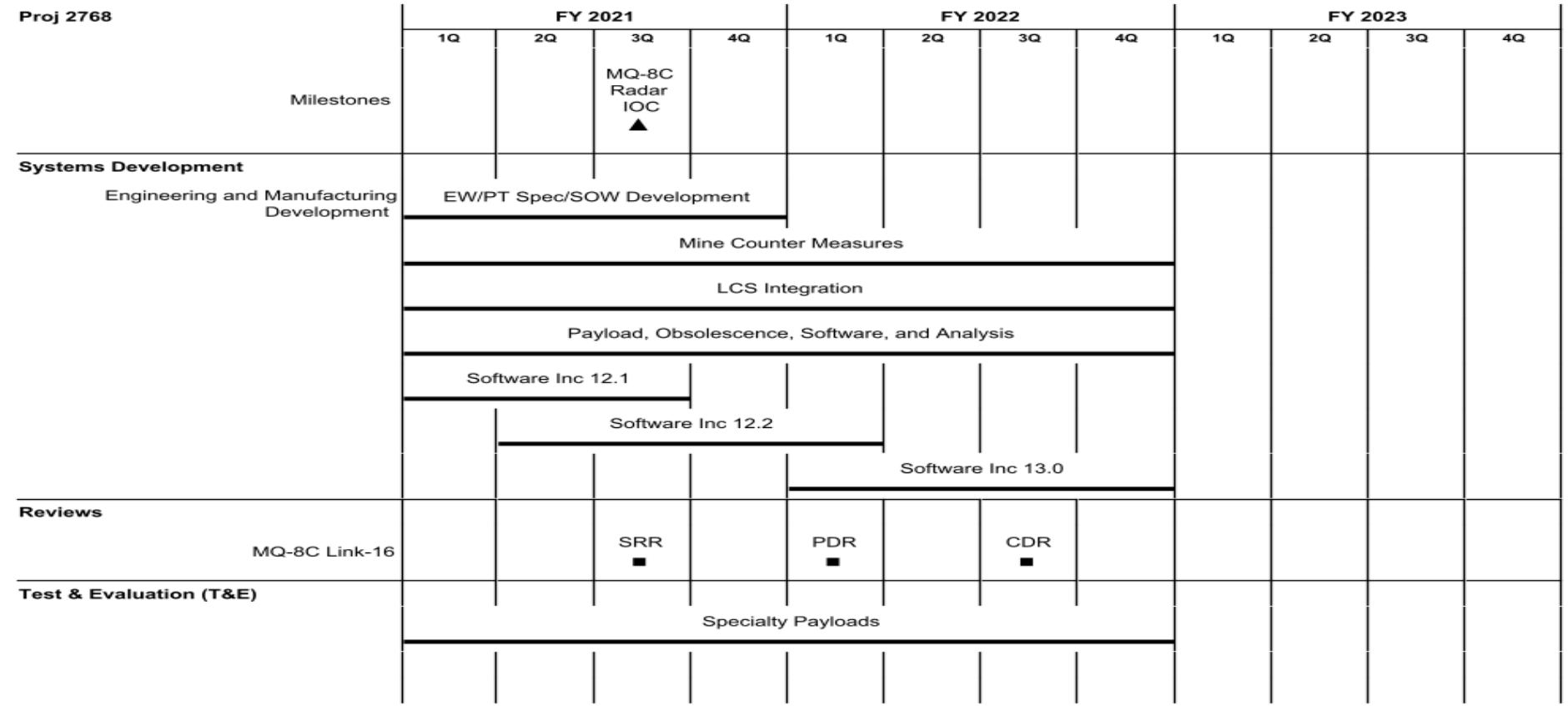

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2768				
Milestones: MQ-8C Radar IOC	3	2021	3	2021
Systems Development: Engineering and Manufacturing Development: EW/PT Spec/ SOW Development	1	2021	4	2021
Systems Development: Engineering and Manufacturing Development: Mine Counter Measures	1	2021	4	2022
Systems Development: Engineering and Manufacturing Development: Littoral Combat Ship (LCS) Integration	1	2021	4	2022
Systems Development: Engineering and Manufacturing Development: Payload, Obsolescence, Software, and Analysis	1	2021	4	2022
Systems Development: Engineering and Manufacturing Development: Software Increment 12.1	1	2021	3	2021
Systems Development: Engineering and Manufacturing Development: Software Increment 12.2	2	2021	1	2022
Systems Development: Engineering and Manufacturing Development: Software Increment 13.0	1	2022	4	2022
Reviews: MQ-8C Link-16: System Requirement Review (SRR)	3	2021	3	2021
Reviews: MQ-8C Link-16: MQ-8C Link 16 Preliminary Design Review (PDR)	1	2022	1	2022
Reviews: MQ-8C Link-16: MQ-8C Link 16 Critical Design Review (CDR)	3	2022	3	2022
Test & Evaluation (T&E): Specialty Payloads	1	2021	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / *MQ-8 UAV*	Project (Number/Name) 9999 / *Congressional Adds*	

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
9999: *Congressional Adds*	0.000	0.000	7.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7.000
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

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. The program includes MQ-8B air vehicles, MQ-8C air vehicles, and associated Mission Control Systems (MCS), Unmanned Aerial Vehicle Common Automatic Recovery Systems (UCARS) and support equipment. In addition to the air vehicles, Radar capabilities were developed under the Navy's Rapid Deployment Capability (RDC) authorities.

The MQ-8 System provides real-time and non-real-time Intelligence, Surveillance and Reconnaissance (ISR) data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The program relies heavily on data transfer within a denied environment, as well as with the interoperability achieved through the use of the Tactical Control System (TCS) software in the MCS, also referred to as a Ground Control Station (GCS), and through the use of the Tactical Common Data Link (TCDL). The data from the MQ-8 is provided through standard DoD Command, Control, Communications, Computers and ISR (C4ISR) system architectures and protocols. 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.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022
Congressional Add: Data bus cybersecurity	0.000	7.000
FY 2021 Accomplishments: N/A		
FY 2022 Plans: N/A		
Congressional Adds Subtotals	0.000	7.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

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 (Data Bus Cybersecurity)	C/BA	TBD : TBD	0.000	0.000		7.000	May 2022	0.000		-		0.000	0.000	7.000	7.000
		Subtotal	0.000	0.000		7.000		0.000		-		0.000	0.000	7.000	N/A

Remarks

FY22 funding provided for MQ-8 Data bus cybersecurity assessment/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	0.000	0.000		7.000		0.000		-		0.000	0.000	7.000	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 9999 / *Congressional Adds*

	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 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
Proj 9999																												
Primary Hardware Development (Data Bus Cybersecurity): Data Bus Cybersecurity									[redacted]																			

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9999				
Primary Hardware Development (Data Bus Cybersecurity): Data Bus Cybersecurity	3	2022	4	2023