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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy **Date:** February 2018

Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0603261N / Tactical Airborne Reconnaissance							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	72.951	3.265	3.707	3.540	-	3.540	3.522	3.593	3.662	3.735	Continuing	Continuing
2467: UxS Common Standards, Interoperability and Integration	72.951	3.265	3.707	3.540	-	3.540	3.522	3.593	3.662	3.735	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element funds efforts to develop common technical and interoperability standards for current and future unmanned sensors, communications, and networking capabilities to achieve the required integration and interoperability of Unmanned Systems(UxS)represented in approved Naval Concept of Operations (CONOPS).

This program is funded under ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES because it includes all efforts necessary to evaluate integrated technologies, representative models or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	3.274	3.707	3.635	-	3.635
Current President's Budget	3.265	3.707	3.540	-	3.540
Total Adjustments	-0.009	0.000	-0.095	-	-0.095
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.003	0.000			
• Rate/Misc Adjustments	0.000	0.000	-0.095	-	-0.095
• Congressional General Reductions Adjustments	-0.006	-	-	-	-

Change Summary Explanation

Technical: Not applicable to baseline.
Schedule: Not applicable.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy										Date: February 2018		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603261N / <i>Tactical Airborne Reconnaissance</i>				Project (Number/Name) 2467 / <i>UxS Common Standards, Interoperability and Integration</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
2467: <i>UxS Common Standards, Interoperability and Integration</i>	72.951	3.265	3.707	3.540	-	3.540	3.522	3.593	3.662	3.735	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Naval Unmanned Aircraft Systems (UAS) strategy employs a family of UAS to perform persistent Intelligence, Surveillance, and Reconnaissance (ISR) in support of naval and joint service missions from forward bases/platforms and naval ships.

In support of the Navy and Marine Corps' overall UAS strategy, this program develops common technical and interoperability standards for current and future unmanned sensors, communications, and networking capabilities to achieve the integration and interoperability of UAS systems represented in approved Naval Concept of Operations (CONOPS). Leveraging fleet input based on current operations and informed by future operational plans, these efforts ensure the desired interoperability and integration of Unmanned Systems (UxS) throughout the battlespace is achieved. This program also establishes the common architecture, including command & control, for all unmanned systems to support and inform future CONOPS development. This effort provides for a cross program view of naval unmanned systems and is the entry point for DoN and other services to address commonality and interoperability opportunities.

Specifically:

- Provides studies and demonstrations in support of naval UAS Family of Systems (FoS) CONOPS development.
- Horizontally integrates across the naval UAS FoS through the development of Naval Interoperability Profiles to achieve required unmanned capabilities and interoperability.
- Provides support for development of common and interoperable UAS standards for use throughout the Department of Defense (DoD) and the North Atlantic Treaty Organization (NATO).
- Conducts CONOPS studies, demonstrations, advanced development/prototyping, and exercises for vehicle control, targeting, and weapons, sensor and payload employment.

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

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Studies and Demonstrations	1.656	1.760	1.920	0.000	1.920
Articles:	-	-	-	-	-
Description: Studies and demonstrations to support CONOPS development from an interoperability perspective for effective integration of UAS. Develop a UAS architecture environment to allow for effective modeling and simulation of common UAS components in representative battlespace architectures.					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>FY 2018 Plans: Continue development of the UAS technical standards to include associated modeling and simulation across Fleet CONOPS scenarios. Demonstrate and validate manned/unmanned interoperability. Provide government engineering support, program office travel, and contract support services.</p> <p>FY 2019 Base Plans: Continue development of the Unmanned Aircraft Systems (UAS) modeling and simulation of Fleet CONOPS scenarios. Demonstrate Manned/Unmanned Interoperability. Provide government engineering support, program office travel, and contract support services.</p> <p>FY 2019 OCO Plans: N/A</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: There is no significant difference between FY 2018 and FY 2019.</p>						
<p>Title: Naval Interoperability & Standardization</p> <p>Articles:</p> <p>Description: Develop UAS common technical standards implementations to achieve desired capabilities and interoperability between manned/unmanned systems.</p> <p>FY 2018 Plans: Continue to develop Unmanned Systems Naval Interoperability Profiles in support of approved naval CONOPS. Support Office of the Secretary of Defense Joint Service and NATO coalition interoperability efforts. Provide government engineering support, program office travel, and contract support services.</p> <p>FY 2019 Base Plans: Continue to develop Unmanned Systems Naval Interoperability Profiles in support of approved naval CONOPS. Support DoN, Joint Service and NATO coalition interoperability efforts. Provide government engineering support, program office travel, and contract support services.</p> <p>FY 2019 OCO Plans: N/A</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p>		1.609 -	1.947 -	1.620 -	0.000 -	1.620 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2017	FY 2018	FY 2019 Base
There is no significant difference between FY 2018 and FY 2019.					FY 2019 OCO
Accomplishments/Planned Programs Subtotals			3.265	3.707	3.540
					0.000
					3.540
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					
D. Acquisition Strategy					
The department will leverage existing government facilities and resources to develop common technical and interoperability standards for current and future unmanned sensors, communications, and networking capabilities to achieve the required interoperability and integration of unmanned systems represented in approved Naval Concept of Operations (CONOPS). Government engineering support will be used for standards development, architectural analysis, modeling and simulation efforts and testing.					
E. Performance Metrics					
UAS capabilities delivered to the warfighter are continually improved upon through efforts that increase the level of commonality, standardization, and interoperability between nodes depicted in existing and planned Naval CONOPS.					

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy												Date: February 2018			
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0603261N / <i>Tactical Airborne Reconnaissance</i>						Project (Number/Name) 2467 / <i>UxS Common Standards, Interoperability and Integration</i>			
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior year Prod Dev no longer funded in the FYDP	Various	Various : Various	18.711	0.000		0.000		0.000		-		0.000	0.000	18.711	-
Subtotal			18.711	0.000		0.000		0.000		-		0.000	0.000	18.711	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	WR	NAWCWD : China Lake, CA	0.520	0.000		0.000		0.000		-		0.000	0.000	0.520	-
Studies & Demonstrations	WR	NAWCAD : Pax River, MD	4.685	0.227	Dec 2016	0.241	Dec 2017	0.245	Dec 2018	-		0.245	Continuing	Continuing	Continuing
Standards Development	C/CPFF	Engility : Lexington Park, MD	1.376	1.404	Jan 2017	1.432	Jan 2018	1.400	Jan 2019	-		1.400	Continuing	Continuing	Continuing
Prior year Support no longer funded in the FYDP	Various	Various : Various	29.295	0.000		0.000		0.000		-		0.000	0.000	29.295	-
Subtotal			35.876	1.631		1.673		1.645		-		1.645	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior year Test & Eval no longer funded in the FYDP	Various	Various : Various	2.627	0.000		0.000		0.000		-		0.000	0.000	2.627	-
Subtotal			2.627	0.000		0.000		0.000		-		0.000	0.000	2.627	N/A

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Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	Various : Various	4.377	0.203	Jan 2017	0.207	Jan 2018	0.218	Jan 2019	-		0.218	Continuing	Continuing	Continuing
Government Engineering Support	WR	NAWCAD : Pax River, MD	9.754	1.429	Dec 2016	1.825	Dec 2017	1.675	Dec 2018	-		1.675	Continuing	Continuing	Continuing
Travel	WR	NAVAIR HQ : Pax River, MD	0.556	0.002	Oct 2016	0.002	Oct 2017	0.002	Oct 2018	-		0.002	Continuing	Continuing	Continuing
Prior year Mgmt Services no longer funded in the FYDP	Various	Various : Various	1.050	0.000		0.000		0.000		-		0.000	0.000	1.050	-
Subtotal			15.737	1.634		2.034		1.895		-		1.895	Continuing	Continuing	N/A
Remarks															
Travel contract type is TO.															
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			72.951	3.265		3.707		3.540		-		3.540	Continuing	Continuing	N/A
Remarks															

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PE 0603261N: *Tactical Airborne Reconnaissance*
Navy

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>UxS Common Standards, Interoperability and Integration</i>				
Naval Interoperability and Standardization:	1	2017	4	2023