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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>					R-1 Program Element (Number/Name) PE 0604636N / <i>Counter Unmanned Aircraft System (C-UAS)</i>							
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	0.000	3.030	2.598	5.529	-	5.529	-	-	-	-	-	-
3241: <i>Counter Unmanned Aircraft Systems (C-UAS)</i>	0.000	3.030	2.598	5.529	-	5.529	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Counter Unmanned Aircraft System (C-UAS) program employs integrated C-UAS solution sets designed to protect high value or critical Naval assets from surveillance, espionage, or hostile threats posed from the inadvertent or unlawful misuse of unmanned aircraft systems (UAS). The C-UAS program provides an integrated Family of Systems (FoS) employing advanced target discrimination and defeat capabilities to meet fleet requirements. More details available at a higher classification level.

FY 2022 funding is requested to continue management and implementation of system assessment. Provide program management and systems engineering support for the technology development and acquisition strategy for fielding material solution. Funding provides for refinement of material solutions, threat assessments, identification and development of advanced target discrimination, defeat capabilities, and prototype development for integration into the C-UAS FoS.

Continues refinement of open architecture solution and interoperability standards for a C-UAS FoS. In partnership with the Joint C-UAS Office (JCO), will identify or develop additional detect and deter capabilities to integrate into the C-UAS FoS. As the JCO designated CORIAN Acquisition Lead, and Program Executive Officer for Unmanned Aviation and Strike Weapons (PEO(U&W)) C-UAS Acquisition program office, continued development, implementation and integration of additional sensor modalities to improve system detect/ID/track/defeat capabilities. Continues efforts to improve interoperability between ashore and afloat C-UAS systems.

B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	3.100	14.259	5.610	-	5.610
Current President's Budget	3.030	2.598	5.529	-	5.529
Total Adjustments	-0.070	-11.661	-0.081	-	-0.081
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-11.661			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.070	0.000			
• Rate/Misc Adjustments	0.000	0.000	-0.081	-	-0.081

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<u>Change Summary Explanation</u> FY22 was adjusted since the previous President's Budget submission by \$0.081 million due to miscellaneous rate adjustments. The FY21 Congressional adjustment was for system development duplication. Schedule for integration of external sensor capabilities has been re-baselined to match the PB22 system development funding profile.		

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy										Date: May 2021		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0604636N / <i>Counter Unmanned Aircraft System (C-UAS)</i>				Project (Number/Name) 3241 / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>			
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
3241: <i>Counter Unmanned Aircraft Systems (C-UAS)</i>	0.000	3.030	2.598	5.529	-	5.529	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Counter Unmanned Aircraft System (C-UAS) program employs integrated C-UAS solution sets designed to protect high value or critical Naval assets from surveillance, espionage, or hostile threats posed from the inadvertent or unlawful misuse of unmanned aircraft systems (UAS). The C-UAS program provides an integrated Family of Systems (FoS) employing advanced target discrimination and defeat capabilities to meet fleet requirements. More details available at a higher classification level.

FY 2022 funding is requested to continue management and implementation of system assessment. Provide program management and systems engineering support for the technology development and acquisition strategy for fielding material solution. Funding provides for refinement of material solutions, threat assessments, identification and development of advanced target discrimination, defeat capabilities, and prototype development for integration into the C-UAS FoS.

Continues refinement of open architecture solution and interoperability standards for a C-UAS FoS. In partnership with the Joint C-UAS Office (JCO) will identify or develop additional detect and deter capabilities to integrate into the C-UAS FoS. As the JCO designated CORIAN Acquisition Lead, and Program Executive Officer for Unmanned Aviation and Strike Weapons (PEO(U&W)) C-UAS Acquisition program office, continued development, implementation and integration of additional sensor modalities to improve system detect/ID/track/defeat capabilities. Continues efforts to improve interoperability between ashore and afloat C-UAS systems.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: C-UAS System Development and Integration	3.030	2.598	5.529	0.000	5.529
Articles:	-	-	-	-	-
FY 2021 Plans: Continue management, evaluation, verification and implementation of system assessments, strategies, improvements, program management, and systems engineering support. Continue management and technical support for C-UAS Systems Integration Lab (SIL). Funding initiates assessment of material and non-material solutions, and continues threat assessments and development of advanced target discrimination and defeat capabilities for integration into the C-UAS FoS. Funding provides for continued development of common Command and Control (C2) and data fusion architecture for C-UAS FoS.					
FY 2022 Base Plans:					

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>Continue management and implementation of system assessment. Provide program management, and systems engineering support for the technology development and acquisition strategy for fielding material solution. Funding provides for refinement of material solutions, threat assessments, identification and development of advanced target discrimination, defeat capabilities, development for integration into the C-UAS FoS. Continue management and technical support for C-UAS Systems Integration Lab (SIL). In partnership with the Joint C-UAS Office (JCO) will identify or develop additional detect and deter capabilities to integrate into the C-UAS FoS. As the JCO designated CORIAN Acquisition Lead, and Program Executive Officer for Unmanned Aviation and Strike Weapons (PEO(U&W)) C-UAS Acquisition program office, continue development, implementation and integration of additional sensor modalities to improve system detect/ID/track/defeat capabilities. Develop efforts to improve interoperability between ashore and afloat C-UAS systems. Funding provides for continued development of data fusion architecture for external sensor integration into a C-UAS common Command and Control (C2).</p> <p>FY 2022 OCO Plans: N/A</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: The funding increase of \$2.9M supports product characterization studies to inform selection of external sensors and development of data fusion architecture for external sensor integration the CORIAN C-UAS system. Schedule for integration of external sensor capabilities has been re-baselined to match the PB22 system development funding profile.</p>					
Accomplishments/Planned Programs Subtotals	3.030	2.598	5.529	0.000	5.529

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

N/A

Remarks

D. Acquisition Strategy

The Navy's acquisition strategy capitalizes on prior Rapid Development Capability efforts while leveraging JCO investments with the Program Office acting as Lead Systems Integrator. This acquisition strategy maintains commonality of current C-UAS solutions while continuing to evaluate, improve, and implement layered defense capabilities into the integrated FoS to defeat evolving threats. More details available at a higher classification level.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604636N / <i>Counter Unmanned Aircraft System (C-UAS)</i>	Project (Number/Name) 3241 / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
System Development	Various	Not Specified : Various	0.000	0.000		0.000		1.892	Jan 2022	-		1.892	-	-	-
Subtotal			0.000	0.000		0.000		1.892		-		1.892	-	-	N/A

Remarks
Product development increase from FY21 to FY22 supports integration of external sensor capabilities with CORIAN C-UAS system

Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Material solutions and threat assessments	Various	Not Specified : Various	0.000	1.750	Dec 2019	1.209	Dec 2020	1.761	Dec 2021	-		1.761	-	-	-
Subtotal			0.000	1.750		1.209		1.761		-		1.761	-	-	N/A

Remarks
FY 2022 Material Solutions and Threat Assessments increase of \$0.552M in support of product characterization assessments for Joint C-UAS Office selected Command and Control (C2).

Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Program Management	Various	Not Specified : Various	0.000	0.550	Oct 2019	0.567	Oct 2020	0.781	Oct 2021	-		0.781	-	-	-
Government Engineering Support	WR	Not Specified : NAWC AD PAX	0.000	0.680	Oct 2019	0.773	Oct 2020	1.035	Oct 2021	-		1.035	-	-	-
Travel	WR	Not Specified : Various	0.000	0.050	Oct 2019	0.049	Oct 2020	0.060	Oct 2021	-		0.060	-	-	-
Subtotal			0.000	1.280		1.389		1.876		-		1.876	-	-	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
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Proj 3241	FY 2020				FY 2021				FY 2022				
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	
System Development													
										C2 Enhancement			
										SIL Enhancement			
Technology Maturation													
	Initial Threat Assessment				Follow-on Threat Assessment 1				Follow-on Threat Assessment 2				
Test and Evaluation													

2022PB - 0604636N - 3241

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3241				
System Development: C2 Architecture Capability	2	2022	4	2022
System Development: SIL Enhancement	1	2022	4	2022
Technology Maturation: Initial Threat Assessment	1	2020	4	2020
Technology Maturation: Follow-on Threat Assessment 1	1	2021	4	2021
Technology Maturation: Follow-on Threat Assessment 2	1	2022	4	2022