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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 0603790N / NATO Research and Deve							
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	72.587	8.567	9.099	9.652	-	9.652	11.121	10.741	10.314	10.528	Continuing	Continuing
2293: NATO Cooperative R & D	72.587	8.567	9.099	9.652	-	9.652	11.121	10.741	10.314	10.528	Continuing	Continuing

A. Mission Description and Budget Item Justification

In accordance with Title 10 United States Code, Section 2350a, this Program Element (PE) provides funding for research and development (R&D) programs with approved allies under international agreements. These funds can only be applied to work efforts in the U.S.. The Under Secretary of Defense, Acquisition and Technology and Logistics (USD, AT&L) must approve each international agreement. The program provides funds for multiple projects under separately approved international agreements as well as funds that support the establishment of such agreements. Each international agreement is summarized in a separate Summary Statement of Intent (SSOI) that also states why the project serves to increase the defense capabilities of the U.S. The SSOI is used to obtain project approval by the Department of the Navy and the Office of the Secretary of Defense.

The North Atlantic Treaty Organization (NATO) R&D cooperative programs differ from other Research, Development, Test and Evaluation (RDT&E) programs because issuance of funding from this PE coincides with the signature of international agreements. These signatures occur throughout the fiscal year and often encounter unexpected delays during the staffing and negotiation phases of agreement processing prior to signature.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	9.867	9.099	10.772	-	10.772
Current President's Budget	8.567	9.099	9.652	-	9.652
Total Adjustments	-1.300	0.000	-1.120	-	-1.120
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	-1.120	-	-1.120
• Congressional Directed Reductions Adjustments	-1.300	-	-	-	-

Change Summary Explanation

The FY 2019 funding request was reduced by \$0.977 million to account for the availability of prior year execution balances.

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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 0603790N / NATO Research and Deve				Project (Number/Name) 2293 / NATO Cooperative R & D			
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
2293: NATO Cooperative R & D	72.587	8.567	9.099	9.652	-	9.652	11.121	10.741	10.314	10.528	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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North Atlantic Treaty Organization (NATO) R&D cooperative programs differ from other Research, Development, Test and Evaluation (RDT&E) programs because issuance of funding from this PE coincides with the signature of international agreements. These signatures occur throughout the fiscal year and often encounter unexpected delays during the staffing and negotiation phases of agreement processing prior to signature

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

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: NATO Cooperative R & D	8.567	9.099	9.652	0.000	9.652
Articles:	-	-	-	-	-
FY 2018 Plans: -Continue to support approved Cooperative projects signed in prior Fiscal Years. -Plan and support approved FY2018 Cooperative projects. Projects include, but are not limited to: -Advanced Surveillance Technology (AST) U.S. and Australia -Allied Munitions Detection-Underwater Initiative (ALMOND-U) U.S. and Germany -Arctic Hydrodynamics U.S. and Finland -Autonomous Maritime Asset Protection Systems (AMAPS) U.S. and United Kingdom -Biomimetic Threat Detection System (BTDS) U.S. and United Kingdom -Coalition Underwater Mine and IED Defeat (CUMID) U.S., Canada, and Norway -Collaborative Situational Awareness Development (CSA DEV) U.S. and Italy -Digital Wideband Receiver Signals Intelligence (DWR-SIGINT) U.S. and Australia					

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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
<div>-Dynamic System Mechanics Advanced Simulation-Shallow Confined Waters (DYSMAS-SCW) U.S. and Germany</div> <div>-Electromagnetic Silencing U.S. and United Kingdom</div> <div>-Helo Seat Damper U.S. and Canada</div> <div>-Hull Treatments U.S. and United Kingdom</div> <div>-International Programs Opportunities Engagement Tool (iPoet)</div> <div>-Japan U.S. Amphibious Vehicle Technology Cooperation (JUSAV) U.S. and Japan</div> <div>-Optical Materials Amendment 1 U.S. and Israel</div> <div>-Submarine Superiority U.S. and Australia</div> <div>-Superconducting Quantum Small Electromagnetic Sensor System Research and Development (Super QSES) U.S. and Australia</div> <div>-Ultra Heavy Lift Amphibious Connector (UHAC) U.S. and Singapore</div> <div>-Undersea Surveillance and Communications (USC) U.S. and Sweden</div> <div>FY 2019 Base Plans:</div> <div>-Continue to support approved Cooperative projects signed in prior fiscal years.</div> <div>-Plan and support approved FY2019 Cooperative projects.</div> <div>Potential Projects include, but are not limited to:</div> <div>-Advanced Structural Monitoring Techniques (ASMT) U.S. and Australia</div> <div>-Advanced Surveillance Technology (AST) U.S. and Australia</div> <div>-Allied Munitions Detection-Underwater Initiative (ALMOND-U) U.S. and Germany</div> <div>-Arctic Hydrodynamics U.S. and Finland</div> <div>-Autonomous Maritime Asset Protection Systems (AMAPS) U.S. and United Kingdom</div> <div>-Biomimetic Threat Detection System (BTDS) U.S. and United Kingdom</div> <div>-Coalition Underwater Mine and IED Defeat (CUMID) U.S., Canada, and Norway</div> <div>-Collaborative Situational Awareness Development (CSA DEV) U.S. and Italy</div> <div>-Dynamic System Mechanics Advanced Simulation-Shallow Confined Waters (DYSMAS-SCW) U.S. and Germany</div> <div>-Electromagnetic Silencing U.S. and United Kingdom</div> <div>-Helo Seat Damper U.S. and Canada</div> <div>-Hull Treatments U.S. and United Kingdom</div> <div>-International Programs Opportunities Engagement Tool (iPoet)</div> <div>-Japan U.S. Amphibious Vehicle Technology Cooperation (JUSAV) U.S. and Japan</div>						

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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
-Optical Materials Amendment 1 U.S. and Israel -Submarine Superiority U.S. and Australia -Superconducting Quantum Small Electromagnetic Sensor System Research and Development (Super QSES) U.S. and Australia -Ultra Heavy Lift Amphibious Connector (UHAC) U.S. and Singapore -Undersea Surveillance and Communications (USC) U.S. and Sweden FY 2019 OCO Plans: N/A FY 2018 to FY 2019 Increase/Decrease Statement: Prj. 2293 NUNN has taken several marks for under execution, as a result the program has been promised the funds put back in the FY18 and FY19						
Accomplishments/Planned Programs Subtotals		8.567	9.099	9.652	0.000	9.652
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
N/A						
E. Performance Metrics						
The intent of the North Atlantic Treaty Organization (NATO) cooperative R&D program is to provide initial funds for projects seeking allied contributions into cooperative research and development projects with the U.S. The primary metric used in the program is foreign contributions into projects supported by the program. The performance goal is met if total foreign contributions into projects exceed total NATO cooperative R&D program funds by over 100%. This program historically does not meet established execution benchmarks. The North Atlantic Treaty Organization (NATO) R&D cooperative programs differ from other Research, Development, Test and Evaluation (RDT&E) programs because issuance of funding from this PE coincides with the signature of international agreements. These signatures occur throughout the fiscal year and often encounter unexpected delays during the staffing and negotiation phases of agreement processing prior to signature.						

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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 0603790N / NATO Research and Deve				Project (Number/Name) 2293 / NATO Cooperative R & D					
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
Developmental Test and Evaluation	C/FP	NAVSEA : Washington Navy Yard, DC	26.126	0.500	Jan 2017	0.250	Apr 2018	0.669	Dec 2018	-		0.669	Continuing	Continuing	Continuing
Developmental Test and Evaluation	C/FP	NSWC : West Bethesda, MD	13.621	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Developmental Test and Evaluation	C/FP	NUWC : Newport, RI	2.352	0.000		0.525	Dec 2017	0.300	Dec 2018	-		0.300	Continuing	Continuing	Continuing
Developmental Test and Evaluation	C/FP	SPAWAR : San Diego, CA	4.853	0.500	Dec 2016	0.818	Apr 2018	1.000	Jan 2019	-		1.000	Continuing	Continuing	Continuing
Developmental Test and Evaluation	C/FP	NAVAIR : Patuxent River, MD	2.136	0.000		2.004	Dec 2017	0.353	Dec 2018	-		0.353	Continuing	Continuing	Continuing
Developmental Test and Evaluation	C/FP	NRL : Washington, DC	2.484	0.000		1.512	Oct 2017	1.830	Nov 2018	-		1.830	Continuing	Continuing	Continuing
Developmental Test and Evaluation	C/FP	NAWC : Point Mugu, CA	6.100	1.000	Jan 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Developmental Test and Evaluation	C/FP	Miscellaneous : Washington Navy Yard	9.531	6.192	Apr 2017	1.170	Mar 2018	1.500	Apr 2019	-		1.500	Continuing	Continuing	Continuing
Deveiopmental Test and Eevaluation	C/FP	MARCOR : Washington.DC	1.200	0.000		0.000		0.000		-		0.000	0.000	1.200	-
Developmental Test and Evaluation	C/FP	NSWCCD : Carderock, MD	2.035	0.000		0.900	May 2018	0.625	Apr 2019	-		0.625	0.000	3.560	-
Developmental Test and Evaluation	C/FP	ONR : Arlington, VA	2.100	0.375	May 2017	0.000		0.775	Mar 2019	-		0.775	0.000	3.250	-
Developmental Test and Evaluation	C/FP	USMC : Qunatic VA	0.000	0.000		0.000		0.500	May 2019	-		0.500	0.000	0.500	-
Developmental Test and Evaluation	C/FP	NSWC : Indian Head, MD	0.000	0.000		0.250	Jan 2018	0.000		-		0.000	0.000	0.250	-
Developmental Test and Evaluation	C/FP	NSWC : Panama City , FL	0.000	0.000		0.250	Dec 2017	0.200	Oct 2018	-		0.200	0.000	0.450	-
Developmental Test and Evaluation	C/FP	GSA : Washington, DC	0.000	0.000		0.400	Feb 2018	0.400	Mar 2019	-		0.400	0.000	0.800	-
Developmental Test and Evaluation	C/FP	DISA : Ft Meade MD	0.000	0.000		0.000		1.500	Dec 2018	-		1.500	0.000	1.500	-

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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
Developmental Test and Eevaluation	C/FP	CDSA : Dam Neck, VA	0.000	0.000		1.020	Mar 2018	0.000		-		0.000	0.000	1.020	-
Subtotal			72.538	8.567		9.099		9.652		-		9.652	Continuing	Continuing	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
ACQ Workforce Fund	Various	Various : Various	0.049	0.000		0.000		0.000		-		0.000	0.000	0.049	-
Subtotal			0.049	0.000		0.000		0.000		-		0.000	0.000	0.049	N/A
			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			72.587	8.567		9.099		9.652		-		9.652	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy

Date: February 2018

Appropriation/Budget Activity
1319 / 4

R-1 Program Element (Number/Name)
PE 0603790N / NATO Research and Deve

Project (Number/Name)
2293 / NATO Cooperative R & D

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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 2293																												
International Agreements																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603790N / NATO Research and Deve	Project (Number/Name) 2293 / NATO Cooperative R & D

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2293				
International Agreements	1	2017	4	2017