

UNCLASSIFIED

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 0603790N / NATO Research and Deve
---	--

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	99.137	7.697	6.880	5.805	-	5.805	-	-	-	-	-	-
2293: <i>NATO Cooperative R & D</i>	99.137	7.697	6.880	5.805	-	5.805	-	-	-	-	-	-

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 Sustainment (USD, A&S) 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 Program Element (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 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	7.697	6.880	10.154	-	10.154
Current President's Budget	7.697	6.880	5.805	-	5.805
Total Adjustments	0.000	0.000	-4.349	-	-4.349
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	-4.349	-	-4.349

Change Summary Explanation

The FY 2022 funding request was reduced by -\$1.1M to account for the availability of prior year execution balances.

UNCLASSIFIED

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 0603790N / NATO Research and Deve				Project (Number/Name) 2293 / NATO Cooperative R & D			
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
2293: NATO Cooperative R & D	99.137	7.697	6.880	5.805	-	5.805	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

In accordance with Title 10 United States Code, Section 2350a, this 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 Sustainment (USD, A&S) 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.

This NATO Research and Development funding provides funding for U.S. efforts under established International Agreements (IAs) intended to address Chief of Naval Operations (CNO) priorities and identified interoperability gaps, as well as activities to support the identification and implementation of those agreements.

- Projects depend on commitment of U.S. and Ally, and are subject to imprecise staffing timelines (funding typically provided when international agreement is signed, often later in the Fiscal Year (FY)).
- Funds must be identified/committed early (1-2 years prior) to indicate support during processing (in Summary Statement of Intent).
- These funds only constitute a portion of U.S. project funding.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: NATO Cooperative R & D	7.697	6.880	5.805	0.000	5.805
Articles:	-	-	-	-	-
FY 2021 Plans:					
-Continue to support approved Cooperative projects from prior Fiscal Years.					
-Plan and support approved FY21 Cooperative projects.					
Projects may include, but are not limited to:					
-Advanced Structural Monitoring Techniques (ASMT) [U.S. and Australia]					
-Anti-Ship Threat Countermeasures (ASTC) [FVEY]					

UNCLASSIFIED

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 0603790N / NATO Research and Deve	Project (Number/Name) 2293 / NATO Cooperative R & D
--	--	---

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<ul style="list-style-type: none"> -DYSMAS Mines [U.S. and Germany] -Electromagnetic Propagation (EM Prop) [U.S. and United Kingdom] -High Efficiency Eye Safer Fiber Lasers PA [U.S. and Australia] -International Programs Opportunities Engagement Tool (iPoet) [U.S.] -Lightweight Transparent Armor (LWTA) [U.S. and United Kingdom] -Maritime Automatic Surface Ship Classification (MASSC) PA [U.S. and Australia] -Next Generation Amphibious Technologies (NGAT) [U.S. and Japan] -Quantum Enhanced Undersea Surveillance Technology (QuEST) PA [U.S. and Australia] -Sensing Through Obscurant Particles in Degraded Visual Environments (STOP-DVE) PA [U.S. and UK] -Submarine Superiority [U.S. and Australia] -Undersea Surveillance and Communications (USC) PA [U.S. and Sweden] -VLF Receiver PA [U.S. and United Kingdom] -Wavelength Refractive Optical Materials (WROM) PA [U.S. and Israel] <p>FY 2022 Base Plans:</p> <ul style="list-style-type: none"> -Continue to support approved Cooperative projects from prior Fiscal Years. -Plan and support approved FY22 Cooperative projects. <p>Projects may include, but are not limited to:</p> <ul style="list-style-type: none"> -Advanced Structural Monitoring Techniques (ASMT) [U.S. and Australia] -Anti-Ship Threat Countermeasures (ASTC) [FVEY] -DYSMAS Mines [U.S. and Germany] -Electromagnetic Propagation (EM Prop) [U.S. and United Kingdom] -High Efficiency Eye Safer Fiber Lasers PA [U.S. and Australia] -International Programs Opportunities Engagement Tool (iPoet) [U.S.] -Lightweight Transparent Armor (LWTA) [U.S. and United Kingdom] -Maritime Automatic Surface Ship Classification (MASSC) PA [U.S. and Australia] -Next Generation Amphibious Technologies (NGAT) [U.S. and Japan] -Quantum Enhanced Undersea Surveillance Technology (QuEST) PA [U.S. and Australia] -Sensing Through Obscurant Particles in Degraded Visual Environments (STOP-DVE) PA [U.S. and UK] -Submarine Superiority [U.S. and Australia] -Undersea Surveillance and Communications (USC) PA [U.S. and Sweden] -VLF Receiver PA [U.S. and United Kingdom] -Wavelength Refractive Optical Materials (WROM) PA [U.S. and Israel] <p>FY 2022 OCO Plans:</p>					

UNCLASSIFIED

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 0603790N / NATO Research and Deve	Project (Number/Name) 2293 / NATO Cooperative R & D
--	--	---

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
N/A					
<i>FY 2021 to FY 2022 Increase/Decrease Statement:</i> The FY22 funding decrease of -\$1.1M is due to reduced support of U.S. Navy Cooperative agreements.					
Accomplishments/Planned Programs Subtotals	7.697	6.880	5.805	0.000	5.805

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

N/A

Remarks

D. Acquisition Strategy

N/A

UNCLASSIFIED

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 0603790N / NATO Research and Deve	Project (Number/Name) 2293 / NATO Cooperative R & D
--	--	---

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			
Developmental Test and Evaluation	C/FP	NAVSEA : Washington Navy Yard, DC	27.545	0.750	Dec 2019	0.250	Nov 2020	0.500	Dec 2021	-		0.500	-	-	-
Developmental Test and Evaluation	C/FP	NSWC : West Bethesda, MD	13.621	0.000		0.000		0.300	Feb 2022	-		0.300	-	-	-
Developmental Test and Evaluation	C/FP	NUWC : Newport, RI	3.061	0.028	Dec 2019	0.697	Nov 2020	0.500	Apr 2022	-		0.500	-	-	-
Developmental Test and Evaluation	C/FP	NIWC : San Diego, CA	7.171	0.565	Jan 2020	0.364	Feb 2021	0.125	Nov 2021	-		0.125	-	-	-
Developmental Test and Evaluation	C/FP	NAVAIR : Patuxent River, MD	4.382	0.075	Dec 2019	0.000		0.000		-		0.000	-	-	-
Developmental Test and Evaluation	C/FP	NRL : Washington, DC	5.520	2.108	Nov 2019	2.655	Jan 2021	1.727	Mar 2022	-		1.727	-	-	-
Developmental Test and Evaluation	C/FP	NAWC : Point Mugu, CA	7.100	0.510	Dec 2019	0.000		0.000		-		0.000	-	-	-
Developmental Test and Evaluation	C/FP	MARCOR : Washington.DC	1.200	0.000		0.000		0.000		-		0.000	-	-	-
Developmental Test and Evaluation	C/FP	NSWCCD : Carderock, MD	3.529	0.300	Apr 2020	0.000		0.000		-		0.000	-	-	-
Developmental Test and Evaluation	C/FP	ONR : Arlington, VA	3.185	0.510	Mar 2020	0.500	Mar 2021	0.600	Dec 2021	-		0.600	-	-	-
Developmental Test and Evaluation	C/FP	USMC : Quantico, VA	0.500	0.000		0.000		0.000		-		0.000	-	-	-
Developmental Test and Evaluation	C/FP	NSWC : Indian Head, MD	0.250	0.300	Apr 2020	0.100	Mar 2021	0.280	Mar 2022	-		0.280	-	-	-
Developmental Test and Evaluation	C/FP	NSWC : Panama City, FL	0.450	0.000		0.000		0.400	May 2022	-		0.400	-	-	-
Developmental Test and Evaluation	C/FP	GSA : Washington, DC	0.800	0.000		0.000		0.000		-		0.000	-	-	-
Developmental Test and Evaluation	C/FP	DISA : Ft Meade MD	1.410	0.000		0.000		0.000		-		0.000	-	-	-
Developmental Test and Evaluation	C/FP	CDSA : Dam Neck, VA	1.020	1.710	Dec 2019	1.440	Nov 2020	0.500	Nov 2021	-		0.500	-	-	-

UNCLASSIFIED

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

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 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
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	[REDACTED]

UNCLASSIFIED

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

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	2020	4	2022