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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> FY 2018 Office of the Secretary Of Defense	<b>Date:</b> May 2017
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0603923D8Z I <i>Coalition Warfare Program</i>											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018 Base</b>	<b>FY 2018 OCO</b>	<b>FY 2018 Total</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	42.530	10.179	10.126	10.740	-	10.740	11.030	11.143	11.351	11.578	Continuing	Continuing
P923: <i>Coalition Warfare</i>	42.530	10.179	10.126	10.740	-	10.740	11.030	11.143	11.351	11.578	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Coalition Warfare Program (CWP) supports DoD organizations that: 1) work with foreign partners to collaboratively address strategic technology gaps for current and future missions; 2) develop interoperability solutions for coalition operations; and 3) develop and strengthen defense relationships. CWP is the only Office of the Secretary of Defense (OSD) program with this mission. Coalition warfare and multinational operations are fundamental features of the U.S. National Security Strategy. Coalitions provide a broad base of technological, operational, and logistical support for military operations and ease the U.S. financial and manpower burdens associated with meeting military goals and objectives. Coalitions and relationships with international partners are high priorities for the nation and the Department of Defense.

CWP supplements a U.S. Government proponent's funding for cooperative efforts, ensuring U.S. funds are sufficient to complete the engagement with the foreign partner(s). When CWP funds are used to help fund a cooperative project, that project leverages technical and financial contributions of the foreign partner(s) and speeds the development and delivery of technical solutions to the warfighter. In its sixteen-year history, CWP has leveraged \$4 of foreign partner funding from 76 foreign partners and \$3 of other U.S. Government funding for every \$1 CWP has invested in cooperative projects. CWP funding enables DoD project teams to move a technology into the next stage of development or to complete and transition a technology to operational forces. These projects may also form the basis for future cooperation with international partners.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018 Base</b>	<b>FY 2018 OCO</b>	<b>FY 2018 Total</b>
Previous President's Budget	10.179	10.126	10.812	-	10.812
Current President's Budget	10.179	10.126	10.740	-	10.740
Total Adjustments	0.000	0.000	-0.072	-	-0.072
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• DTIC Offset Bill	-	-	-0.072	-	-0.072

**Change Summary Explanation**

N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Office of the Secretary Of Defense										Date: May 2017		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603923D8Z / <i>Coalition Warfare Program</i>				Project (Number/Name) P923 / <i>Coalition Warfare</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P923: <i>Coalition Warfare</i>	42.530	10.179	10.126	10.740	-	10.740	11.030	11.143	11.351	11.578	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Coalition Warfare Program (CWP) supports DoD organizations that: 1) work with foreign partners to collaboratively address strategic technology gaps for current and future missions; 2) develop interoperability solutions for coalition operations; and 3) develop and strengthen defense relationships. CWP is the only Office of the Secretary of Defense (OSD) program with this mission. Coalition warfare and multinational operations are fundamental features of the U.S. National Security Strategy. Coalitions provide a broad base of technological, operational, and logistical support for military operations and ease the U.S. financial and manpower burdens associated with meeting military goals and objectives. Coalitions and relationships with international partners are high priorities for the nation and the Department of Defense.

CWP supplements a U.S. Government proponent's funding for cooperative efforts, ensuring U.S. funds are sufficient to complete the engagement with the foreign partner(s). When CWP funds are used to help fund a cooperative project, that project leverages technical and financial contributions of the foreign partner(s) and speeds the development and delivery of technical solutions to the warfighter. In its sixteen-year history, CWP has leveraged \$4 of foreign partner funding from 76 foreign partners and \$3 of other U.S. Government funding for every \$1 CWP has invested in cooperative projects. CWP funding enables DoD project teams to move a technology into the next stage of development or to complete and transition a technology to operational forces. These projects may also form the basis for future cooperation with international partners.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
<b>Title:</b> Previous Year Continuing Projects	8.817	5.661	2.787
<b>Description:</b> Program provided additional funding to projects that began in earlier selection cycles. Currently funded portfolio includes projects with 12 different foreign partners.			
<b>FY 2016 Accomplishments:</b> Completion of efforts that will result in improved submarine force network interoperability, improved standoff detection of explosives, and non-lethal options for disabling maritime vessels.			
<b>FY 2017 Plans:</b> Completion of efforts that will enhance detection, classification and mapping of underwater munitions and mines and increase underwater power to sensors in marine environments.			
<b>FY 2018 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Office of the Secretary Of Defense		<b>Date:</b> May 2017		
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603923D8Z / <i>Coalition Warfare Program</i>	<b>Project (Number/Name)</b> P923 / <i>Coalition Warfare</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Completion of efforts that will improve directed energy weapons interface with ship's electrical power, maintain warfighters' access to position, navigation, and timing signals when GPS is unavailable, and improve tracking of space objects and debris in real-time.				
<b>Title:</b> Improved Detect, Track, Defeat of Aerial Target Threats  <b>Description:</b> U.S. Army project to improve detection, tracking, and defeat of low, slow, small unmanned aerial systems (UAS) by developing and demonstrating radar, munition and launcher system technologies.  <b>FY 2017 Plans:</b> Characterize threat UAS and determine optimal designs.  <b>FY 2018 Plans:</b> Develop warhead and update radar algorithms.		-	0.750	0.750
<b>Title:</b> Advanced Methods for Space Object Understanding  <b>Description:</b> US Air Force project to improve coalition space situational awareness and command and control by improving methods for utilizing coalition partner sensor data on resident space objects.  <b>FY 2017 Plans:</b> Concept of employment and use case development. Initial system design and comparative algorithm analysis.  <b>FY 2018 Plans:</b> Initial implementation and testing and continued development of visualization tools.		-	0.300	0.350
<b>Title:</b> Advance Al-Mg Alloys for Land and Sea Applications  <b>Description:</b> Joint US Army and Navy project to improve welded strength, ballistics, and marine corrosion resistance of current alloy used in ground, amphibious, and sea systems by developing and validating a new class of multirole 5000 series aluminum-magnesium alloys.  <b>FY 2017 Plans:</b> Initial small-scale alloy property screening.  <b>FY 2018 Plans:</b> Final screening to confirm alloy properties.		-	0.072	0.085
<b>Title:</b> Biosurveillance Application Tool Development  <b>Description:</b> DTRA project to demonstrate enhanced decision making for biological agent outbreak response by developing regional specific biosurveillance analytical applications.		-	0.160	0.188

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603923D8Z / Coalition Warfare Program	Project (Number/Name) P923 / Coalition Warfare		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
FY 2017 Plans: Conduct baseline scoping studies for discovery of data services and information systems. Conduct design review and pre-demonstration testing.				
FY 2018 Plans: Conduct scenario development for exercise and conduct demonstration.				
Title: High Powered Radio Frequency (RF) Vehicle/Vessel Stopping  Description: US Navy/US Marine Corps/US Coast Guard project to demonstrate non-lethal weapon vessel/vehicle stopping systems, using recent developments in vacuum electronics designs and solid state power modulators.		-	0.635	0.615
FY 2017 Plans: Conduct radio frequency weapon effects research as well as hardware development and integration.				
FY 2018 Plans: Complete power combining research and development; test hardware.				
Title: Moth Eye Structures for Optics and Detectors  Description: US Navy project to improve durability and dependability of antireflective coatings on optics, detectors, and focal plane arrays by developing and testing antireflective moth eye surfaces.		0.238	0.420	0.392
FY 2016 Accomplishments: Initial equipment purchase. Design and characterization of moth eye structures on optics and detectors.				
FY 2017 Plans: Improve moth eye structure fabrication and characterization on focal plane arrays.				
FY 2018 Plans: Optimize moth eye structure and conduct field test with sensor systems.				
Title: Remote Multi-Sensor Multi-Angular Terrain Characterization  Description: US Navy project to increase accuracy of terrain characterization tools for derivation of surface and sub-surface sediment conditions and trafficability estimation by developing and testing a combined multi-sensor data collection and processing methodology.		-	0.526	0.109
FY 2017 Plans:				

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
Initial equipment purchases and software integration.				
FY 2018 Plans: Implementation of additional components, data analysis, and preparation for final field demonstration.				
Title: Classified Project FY 2017 Plans: Classified project. FY 2018 Plans: Classified project.		-	0.250	0.500
Title: Rapid Integration of Coalition Sensors Description: US Army project to rapidly integrate information, surveillance, target acquisition, and reconnaissance sensors and validate interoperability of these sensors with current architectures by developing methodology and software tools. FY 2017 Plans: Develop requirements, conduct system engineering, design and development of integration tools. Integrate sensors and conduct demonstration. FY 2018 Plans: Complete system engineering and design and development of integration tools. Develop architecture interface.		-	0.200	0.200
Title: Small Scalable Kinetic Weapon Phase 2 Description: US Air Force project to add all-weather, night and moving target capability to the Small Scalable Kinetic Weapon, to provide a more robust, scalable, low collateral damage weapon. FY 2017 Plans: Initial component procurement. FY 2018 Plans: Lab set up and instrumentation for testing.		-	0.025	0.700
Title: Project Selections Description: Program will conduct competitive nomination process to identify new projects. FY 2018 Plans:		-	-	2.972

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Projects selected based on Combatant Command, Service, Joint Staff, OSD, and DoD Agency priorities and requirements.				
<b>Title:</b> Coalition Warfare Program (CWP) Support  <b>Description:</b> Program funds contractors to support CWP program management, which includes: ensuring CWP projects are consistent with the policies and principles articulated in Department of Defense directives and regulations; monitoring project progress toward goals and objectives to include tracking project budget execution; providing assessments of program status and risk to higher authorities; briefing and providing recommendations to the Director, International Cooperation concerning new and continuing CWP projects; supporting periodic meetings to foster international cooperation and improve U.S. interoperability with foreign partners; supporting CWP proposal selection process; briefing program stakeholders on the status of CWP projects and interoperability initiatives; educating Combatant Command, Service, Agency, and OSD personnel about the CWP and the opportunity to improve coalition interoperability.  <b>FY 2016 Accomplishments:</b> Contractor provided management support of the CWP, to include evaluating proposals for FY17 funding, attending RDT&E meetings and events, and monitoring and managing projects' technical and financial performance.  <b>FY 2017 Plans:</b> Contractor provides management support of the CWP, to include evaluating proposals for FY18 funding, attends RDT&E meetings and events, and monitors and manages projects' technical and financial performance.  <b>FY 2018 Plans:</b> Contractor provides management support of the CWP, to include evaluating proposals for FY19 funding, attends RDT&E meetings and events, and monitors and manages projects' technical and financial performance.		0.541	0.552	0.562
<b>Title:</b> Interoperability and Collaboration Initiatives  <b>Description:</b> Program provides funds in support of new or planned acquisition programs with the aim of 1) promoting coalition interoperability early in the requirements or technical development phases, 2) harmonizing common goals between U.S. and foreign partners, 3) improving management of collaborative efforts. Funds support workshops, risk reduction efforts, standards development, architecture analysis, and information management initiatives.  <b>FY 2016 Accomplishments:</b> Program will fund efforts aimed at building partnerships, improving U.S. interoperability with foreign partners and improving collaborative project processes.  <b>FY 2017 Plans:</b>		0.583	0.575	0.530

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Office of the Secretary Of Defense		<b>Date:</b> May 2017	
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603923D8Z / <i>Coalition Warfare Program</i>	<b>Project (Number/Name)</b> P923 / <i>Coalition Warfare</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2016</b>	<b>FY 2017</b>
Program will fund efforts aimed at building partnerships, improving U.S. interoperability with foreign partners and improving collaborative project processes.			
<b>FY 2018 Plans:</b> Program will fund efforts aimed at building partnerships, improving U.S. interoperability with foreign partners and improving collaborative project processes.			
<b>Accomplishments/Planned Programs Subtotals</b>		10.179	10.126
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b> The Combatant Commands, Services, Defense Agencies, and the Office of the Secretary of Defense nominate candidate projects on an annual basis. CWP provides selected projects up to three years of funding. The Program selects projects that address DoD priorities and meet the needs and requirements specified by the Joint Staff and the Combatant Commanders. Projects have equitable contributions from international partners, strong potential for transition, and contribute to allied interoperability and/or meet a user need.			
<b>E. Performance Metrics</b> After successful completion of the competitive nomination process, initial project funding is dependent on receipt of project documentation, which includes financial information, project plan, description of project team, etc. Continued project funding is dependent on compliance with CWP requirements, which include: adequate progress toward each project's stated goals, timely reporting on financial status and project activities, financial document close-out, provision of updated project plans and charts, and progress towards transition goals.			

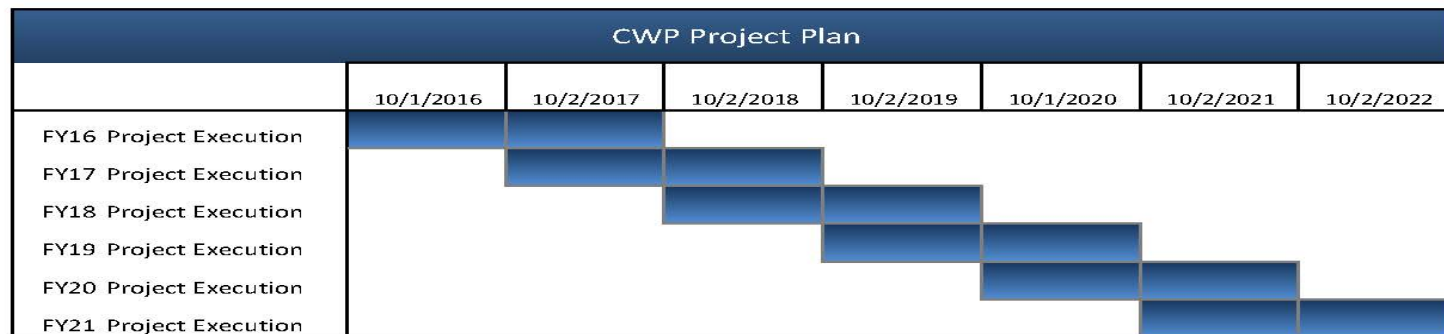
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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: FY 2018 Office of the Secretary Of Defense</b>												<b>Date: May 2017</b>			
<b>Appropriation/Budget Activity</b> 0400 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0603923D8Z / <i>Coalition Warfare Program</i>						<b>Project (Number/Name)</b> P923 / <i>Coalition Warfare</i>			
<b>Product Development (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Coalition Warfare Program Project Product Development Costs	Various	Various : Various	27.728	8.088		7.760		8.800		-		8.800	-	-	-
<b>Subtotal</b>			27.728	8.088		7.760		8.800		-		8.800	-	-	-
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Coalition Warfare Program Project Test and Evaluation Costs	Various	Various : Various	8.470	1.296		1.556		0.848		-		0.848	-	-	-
<b>Subtotal</b>			8.470	1.296		1.556		0.848		-		0.848	-	-	-
<b>Management Services (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Coalition Warfare Program Project Management Services Costs	Various	Various : Various	6.332	0.795		0.810		1.092		-		1.092	-	-	-
<b>Subtotal</b>			6.332	0.795		0.810		1.092		-		1.092	-	-	-
			<b>Prior Years</b>	<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			42.530	10.179		10.126		10.740		-		10.740	-	-	-
<b>Remarks</b>															



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: FY 2018 Office of the Secretary Of Defense</b>			<b>Date:</b> May 2017
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603923D8Z / <i>Coalition Warfare Program</i>	<b>Project (Number/Name)</b> P923 / <i>Coalition Warfare</i>	



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Office of the Secretary Of Defense			<b>Date:</b> May 2017
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603923D8Z / <i>Coalition Warfare Program</i>	<b>Project (Number/Name)</b> P923 / <i>Coalition Warfare</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FY16 CWP Project Execution	1	2016	4	2017
FY17 CWP Project Execution	1	2017	4	2018
FY18 CWP Project Execution	1	2018	4	2019
FY19 CWP Project Execution	1	2019	4	2020
FY20 CWP Project Execution	1	2020	4	2021
FY21 CWP Project Execution	1	2021	4	2022