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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Office of the Secretary Of Defense	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>					R-1 Program Element (Number/Name) PE 0603727D8Z I <i>Joint Warfighting Program</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
Total Program Element	31.044	4.852	7.848	6.349	-	6.349	7.039	7.140	7.315	7.509	Continuing	Continuing
P727: <i>Joint Warfighting</i>	31.044	4.852	7.848	6.349	-	6.349	7.039	7.140	7.315	7.509	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Warfighting Program (JWP) is a pivotal resource that synchronizes two Department-wide domains, military requirements and acquisition, with shared analyses and actionable assessments. JWP supports partnership for customers including joint command staffs, the Joint Staff, and OSD elements responsible for oversight of Component programs that equip forces for joint missions. The account underwrites analyses and studies, limited-scope experiments, and partnerships that define joint capability gaps and develop actionable requirements for follow-on acquisition efforts. JWP specifically aims to assist joint-end-users by analyses that identify essential capability improvements as actionable joint military needs expressed as specific Key Performance Parameters (KKPs) and Key System Attributes (KSAs). These analyses and assessments deliver independent perspectives on ways to align Service and Agency investments and potential solutions for capability gaps created by evolving threats not aligned to single Component missions. This program element plays a major role in portfolio assessments aiming to identify critical gaps between Service-generated capabilities and affordable joint solutions. JWP funds venues for demonstration of emergent technology-based prototypes that enable joint customers to draft requirements based on realistic understanding of feasible solutions. JWP also underwrites staff analyses in the Acquisition, Technology & Logistics staff of the Office of the Secretary of Defense (OSD). Working with Service, OSD, the Joint Staff and joint command counterparts, the AT&L staff performs portfolio assessments focusing on joint warfighting environments in the future.

Typical projects funded with JWP include independent analysis and translation of capability gap assessments into actionable military needs statements, identification of candidate solutions via experimentation, translation of solution concepts into field demonstrations, and remedy of joint capability gaps in partnership with Defense agents for doctrine changes and technology development. JWP resources support analytic expertise on joint issues. In this activity, JWP underwrites small grants to invigorate employment of experimentation and analysis, to formulate strategies to resolve joint capability gaps, and to stimulate participation in the Department enterprises for joint experimentation and joint capability development. JWP resources also support the development of tools supporting joint analytic efforts.

The JWP funds contributes resources to examination of potential remedies for joint mission capability gaps. In many cases, JWP funds initiatives for process improvements serving all Components, but aligned with no single Service or Agency. These early assessments and studies of potential capability gap solutions can accelerate engineering development, subsequent field experiments, and capability demonstrations in field conditions. JWP often represents the first effort to define integrated and innovative solutions across the range of Doctrine, Organization, Training, Material, Leadership and Personnel-Facilities through cross-cutting analysis and studies in partnership with the OSD staffs serving AT&L, Policy and with elements of the Joint Staff. It evolves analytic development of Joint Military Requirements addressing evolving threats / missions. On a modest funding base, JWP forges collaborative analysis efforts across OSD and joint staffs to address tough DoD-wide issues like ISR, cyber, EW and UAS.

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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	4.982	7.848	8.357	-	8.357
Current President's Budget	4.852	7.848	6.349	-	6.349
Total Adjustments	-0.130	0.000	-2.008	-	-2.008
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.130	-			
• SRRB Reductions/Management	-	-	-2.008	-	-2.008
Realignment					

Change Summary Explanation

Also, FY16 is reflective of a congressional reduction for prior year carryover.

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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 / 3					R-1 Program Element (Number/Name) PE 0603727D8Z / Joint Warfighting Program				Project (Number/Name) P727 / Joint Warfighting			
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
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Support for Joint Capability Analysis	2.859	4.709	3.100
Description: JWP resources are dedicated to analytic support for joint costumers and OSD staff elements to conduct joint capability analysis and joint customers. JWP supports joint capabilities by promoting analyses and assessments to address			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>specific joint challenges specific. It employs rigorous analysis and experimentation methodologies in support of specific mission assignments. It supports joint command identification of capability gaps and selectively funds limited objective experiments experiment to understand a concept or technology that addresses a specific joint mission challenge. JWP also resources analytic analysis and studies on joint issues. These early assessments and studies of potential capability gap solutions can accelerate engineering development, subsequent field experiments, and capability demonstrations in field conditions. JWP often represents the first effort to define integrated and innovative solutions across the range of Doctrine, Organization, Training, Material, Leadership and Personnel-Facilities through cross-cutting analysis and studies in partnership with the OSD staffs serving AT&L, Policy and with elements of the Joint Staff.</p> <p>FY 2016 Accomplishments: Developed an Electronic Warfare (EW) strategy to address capability gaps informed by supporting EW analyses in Joint Airborne Electronic Attack, Electronic Protection techniques, passive targeting, and a comparison of US EW capabilities to threat signals. Supported three Joint Interagency Field Experiments, coordinated by the Naval Post Graduate School, for Combatant Commands to access the applicability of emerging technologies to address capability gaps and refine requirements. Conducted Non-traditional ISR Study to examine joint Battlefield awareness, cyber and force application capability portfolios for engaging targets in the highly contested environment; conducted analysis of collection effectiveness and determined bandwidth demand and throughput capabilities for the baseline architecture capacity; conclusions will inform follow-on Analysis of Alternatives efforts and enterprise ISR activities. Focused on COTS neutral networks, long endurance COTS VTOL UAVs, and autonomous drone swarms.</p> <p>FY 2017 Plans: Continue emphasis on analysis insights for acquisition decisions focused on capability development serving the needs of joint commanders and joint clients. Provide direct analytical support responding to emergent joint military staffs to identify capability gaps and military needs for material solutions. Support joint commanders to develop and refine capability requirements. Continue to partner with joint military staffs, encouraging experimentation cells to address mission capability gaps, explore potential solutions, and improve understanding of new technologies and concepts in response to evolving missions and military threats. Empower the joint military staffs to employ rigorous analysis and experimentation methodologies.</p> <p>FY 2018 Plans: Provide direct analytical support responding to emergent joint military staffs to identify capability gaps and military needs for material solutions. . Continue to partner with joint military staffs, encouraging experimentation cells to address mission capability gaps, explore potential solutions, and improve understanding of new technologies and concepts in response to evolving missions and military threats. Empower the joint military staffs to employ rigorous analysis and experimentation methodologies.</p>			
Title: Analytic Development of Joint Military Requirements Addressing Evolving Threats / Missions		1.993	3.139
			3.249

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Description: This segment underwrites innovative, responsive and timely analytic development of Joint Military requirements addressing evolving missions and threats. It supports joint capability development serving the needs of joint warfighters in partnership with senior acquisition staffs. It provides an independent source to examine potential remedies for mission capability gaps and can establish a framework for subsequent field experiments, capability demonstrations or accelerated acquisition. Joint warfare independent analysis often represents the first effort to define alternative solutions across the range of Doctrine, Organization, Training, Material, Leadership and Personnel-Facilities. On a modest funding base, JWP forges collaborative analysis efforts across OSD and joint staffs to address tough DoD-wide issues like ISR, cyber, EW and UAS.</p> <p>FY 2016 Accomplishments: Continued development of an architecture to enable evaluation of Electronic Warfare concepts and joint mission-level modeling, including the modeling of multiple EW weapon systems performance and compatibility in congested electromagnetic environments. Developed and executed a Fly off experiment in a field environment with Naval Postgraduate School to evaluate industry's ability to produce a software defined radio as a replacement for the Joint Service PRQ-7 Combat Survival Radio system; conducted research and analysis in support of the Joint Service Combat Locator Evader (CSEL); effort included development of analysis of alternatives. Developed a requirements based global ISR investment methodology that identified and consolidated Combatant Command ISR baseline requirements shortfalls; integrated and correlated capability shortfalls with Services and Defense Agencies; established methodology and associated analytical construct and suite of tools to identify capability data bases for DOD rapid acquisition policy user risk assessment.</p> <p>FY 2017 Plans: This segment will provide independent analysis of joint issues and capability gaps. It will provide responsive and timely capability development pathways and recommendations for rapid acquisition, field experiments conducted by joint military staffs and units. It will provide an independent source for enabling capability development suitable for joint experimentation undertaken by joint authorities.</p> <p>FY 2018 Plans: This segment will provide independent analysis of joint issues and capability gaps. It will provide responsive and timely capability development pathways and recommendations for rapid acquisition, field experiments conducted by joint military staffs and units. It will provide an independent source for analysis and enable capability development suitable for joint experimentation undertaken by joint authorities.</p>			
Accomplishments/Planned Programs Subtotals		4.852	7.848
		6.349	

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<p><u>C. Other Program Funding Summary (\$ in Millions)</u> N/A</p> <p><u>Remarks</u></p> <p><u>D. Acquisition Strategy</u> N/A</p> <p><u>E. Performance Metrics</u> Performance is measured through metrics including (1) objective validation of enhanced CCMD capabilities to perform joint missions in their assigned theaters and areas of responsibility, (2) documented delivery effective joint operational concepts, (3) confirmed production of refined and validated capability descriptions.</p>		