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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Office of the Secretary Of Defense **Date:** February 2019

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0307577D8Z I <i>Intelligence Mission Data (IMD)</i>
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	13.485	13.086	6.889	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	33.460
<i>715: Intelligence Mission Data</i>	13.485	13.086	6.889	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	33.460

A. Mission Description and Budget Item Justification

IMD project supports the Department's governance process for balancing IMD supply and demand and addressing how to modernize IMD generation. In order to support weapons systems with intelligence data, we need to improve the modeling, simulation and assessment process for weapon systems prior to material solutions to better understand investment needs for both platforms and intelligence data. IMD is all source intelligence derived data necessary to do the following for weapon systems: to identify and counter constantly improving threat weapons and radar systems; optimize sensor design and validate sensor functionality; and support system test, evaluation and deployment. Modern weapon systems are reliant upon increasingly voluminous and precise IMD to meet performance requirements. This demand signal for mission support data is increasing due to requirements for both analyst-evaluated, precise data and machine-processed data to be used by weapons and control systems with increasing autonomy. This increasing requirement is highlighting the need to have a big data/data autonomy environment to support advanced weapon systems. In order for the community to meet modern weapons system requirements, there needs to be a measured shift with balance and attention paid to legacy and new capability needs. There are unacceptable gaps, compounded by non-assessed program office needs and requirements that may not be obtainable; therefore, balancing supply and demand is urgently needed.

B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	13.111	6.889	7.002	-	7.002
Current President's Budget	13.086	6.889	0.000	-	0.000
Total Adjustments	-0.025	0.000	-7.002	-	-7.002
• Congressional General Reductions	-0.025	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Departmental Adjustment	-	-	-7.002	-	-7.002

Change Summary Explanation

Transfers funding from the Office of Under Secretary of Defense (Intelligence) to the Military Departments and Defense Intelligence Agency for direct execution and responsibilities of the Intelligence Mission Data Intelligence Support to Acquisitions capabilities.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Office of the Secretary Of Defense										Date: February 2019		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0307577D8Z / <i>Intelligence Mission Data (IMD)</i>				Project (Number/Name) 715 / <i>Intelligence Mission Data</i>			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
<i>715: Intelligence Mission Data</i>	13.485	13.086	6.889	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	33.460
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

IMD project supports the Department's governance process for balancing IMD supply and demand and addressing how to modernize IMD generation. In order to support weapons systems with intelligence data we need to improve the modeling, simulation and assessment process for weapon systems prior to material solutions to better understand investment needs for both platforms and intelligence data. IMD is all source intelligence derived data necessary to do the following for weapon systems: to identify and counter constantly improving threat weapons and radar systems; optimize sensor design and validate sensor functionality; and support system test, evaluation and deployment. Modern weapon systems are reliant upon increasingly voluminous and precise IMD to meet performance requirements. This demand signal for mission support data is increasing due to requirements for both analyst-evaluated, precise data and machine-processed data to be used by weapons and control systems with increasing autonomy. This increasing requirement is highlighting the need to have a big data/data autonomy environment to support advanced weapon systems. In order for the community to meet modern weapons system requirements, there needs to be a measured shift with balance and attention paid to legacy and new capability needs. There are unacceptable gaps, compounded by non-assessed program office needs and requirements that may not be obtainable; therefore, balancing supply and demand is urgently needed.

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

	FY 2018	FY 2019	FY 2020
Title: Intelligence Mission Data	13.086	6.889	0.000
<p>Description: The IMD project supports the Department's governance process for balancing IMD supply and demand and addressing how to modernize IMD generation. Modern weapon systems are reliant upon increasingly voluminous and precise IMD to meet performance requirements, causing IMD shortfalls. The Department resolved to correct IMD problems by chartering a temporary Acquisition, Intelligence and Requirements Task Force (AIRTF). The AIRTF instilled and enforced discipline, bridging long-standing policy, cultural and financial divides among these three communities, and built innovative approaches to solutions.</p> <p>FY 2019 Plans: Develop efforts with the Air Force and Navy Joint Simulation Environments to determine IMD sufficiency, conducting experiments that improve IMD prioritization and standardization across the consumers, prototype and develop new systems automation which will better support 5th Gen Weapon systems' determination of requirements priority/criticality. Initiate addition of ground combat systems into the environments.</p> <p>Complete the development phase of the Acquisition, Intelligence and Requirements Visualization of Enterprise Workflows (AIRVIEW) dashboard tool that enables data-driven resource decision making at a Departmental level. The tool captures and</p>			

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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0307577D8Z / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 715 / <i>Intelligence Mission Data</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020
tracks extensive intelligence data requirements for combat systems in acquisition and operations, and the Defense Intelligence Enterprise production response to those requirements, along with valuable business analytics.			
Complete the prototyping of enhancements to intelligence mission data enterprise databases (to include consumer elements) for the sake of enhancing and speeding data and information sharing, shrinking response times to adversary changes from months/years to days/weeks.			
Complete the development of a prototype that accelerates accumulation of raw intelligence data about modern complex emitters that is a precursor to Electronic Warfare intelligence data. The data is processed into a form that is more rapidly consumable and leads to a shorter response time from detection of new operating modes by adversary emitters to reprogramming centers' creation of the updated mission data files for friendly aircraft that will enhance their survivability and lethality.			
Complete efforts related to evaluating and improving the availability of an intelligence workforce that provides the Department with high quality support to acquisition programs. Institute a first-ever acquisition-intelligence training course at Defense Acquisition University, and articulate a career occupation program path for professionals with suitable competencies.			
FY 2020 Plans: N/A			
FY 2019 to FY 2020 Increase/Decrease Statement: Transfers funding from the Office of the Under Secretary of Defense (Intelligence) to the Military Departments and Defense Intelligence Agency for direct execution and responsibilities of the Intelligence Mission Data Intelligence Support to Acquisition capabilities.			
Accomplishments/Planned Programs Subtotals	13.086	6.889	0.000

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u> <u>Base</u>	<u>FY 2020</u> <u>OCO</u>	<u>FY 2020</u> <u>Total</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0307577D8Z: <i>Intelligence Mission Data</i>	0.853	5.152	1.992	-	1.992	2.535	2.873	2.901	2.928	Continuing	Continuing

Remarks

D. Acquisition Strategy

The acquisition, management, and contracting strategy involves the following:

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Office of the Secretary Of Defense		Date: February 2019
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0307577D8Z / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 715 / <i>Intelligence Mission Data</i>
<ul style="list-style-type: none">• Adhere to guidance outlined in the DoD 5000, Directive 7, Federal Acquisition Regulations (FAR), and FAR Supplement Policies and Procedures.• Acquire and sustain IMD capabilities, systems, tools, products, and services through a disciplined, yet agile, process that ensures information related capabilities are available for DoD components.• Sustain an acquisition process that is responsive and responsible to internal and external customers and stakeholders.• Support advanced weapons programs need for intelligence at the earliest point in the acquisition of the program.		
<u>E. Performance Metrics</u> Performance metrics are used to assess the progress toward integrating intelligence mission data into the acquisition cycle. The following metrics focus on the return on investment of RDTE and O&M activities and assess the degree to meeting mission goals: <ul style="list-style-type: none">• Measure percent of funds that are used to improve advanced weapons platforms intelligence integration. Goal is 100%.• Measure percent of identified advanced weapons systems platforms that have a minimum baseline for IMD requirements and production. Goal is 100%.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Office of the Secretary Of Defense **Date:** February 2019

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0307577D8Z / Intelligence Mission Data (IMD)	Project (Number/Name) 715 / Intelligence Mission Data
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Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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			
Cost Capability analysis (CCA) with Force-on-Force Campaign Analysis (FCA)	Various	Various : Various	3.517	0.364	Nov 2017	1.166		-		-		-	0.000	5.047	5.047
Subcategory: Joint Simulation Environment (JSE) IMD Quality Program	C/FFPLOE	Navy (NAWCAD); Air Force (SIMAF) : Pax River, MD; WPAFB, OH	1.410	2.065	Mar 2018	-		-		-		-	0.000	3.475	3.475
Enterprise-wide Source Data Access	Various	Various : Various	1.335	0.089	Dec 2018	1.143		-		-		-	0.000	2.567	2.567
Subcategory: IMD Technology Projects Licensing / Prototyping	C/FFP	ARMY RESEARCH LAB : Adelphi, MD	1.138	-		0.570		-		-		-	0.000	1.708	1.708
Intelligence Mission Data (IMD) Automation	Various	Various : Various	0.909	0.859	Mar 2018	-		-		-		-	0.000	1.768	1.768
Subcategory: IMD Emitter Engineering Model Automated Workflow	C/TBD	ARMY RESEARCH LAB : Adelphi, MD	-	4.000	Jul 2018	2.000		-		-		-	0.000	6.000	6.000
Subcategory: IMD Intercept TLM Algorithm Generation Support	C/TBD	GSA/FAS Region 5 : Fairborn, OH	2.035	-		-		-		-		-	0.000	2.035	2.035
Subcategory: EIM for IMD to the Cockpit	C/CPAF	NSA/B : Fort Meade MD	1.136	-		-		-		-		-	0.000	1.136	1.136
Subtotal			11.480	7.377		4.879		-		-		-	0.000	23.736	N/A

Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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			
Cost Capability Analysis (CCA) w/ Force-on-Force Campaign Analysis (FCA)	Various	Various : Various	-	0.509	Sep 2018	-		-		-		-	0.000	0.509	0.509
Other	Various	Various : Various	-	0.119	Dec 2018	0.480		-		-		-	0.000	0.599	0.599

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Office of the Secretary Of Defense												Date: February 2019			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 7				PE 0307577D8Z / Intelligence Mission Data (IMD)				715 / Intelligence Mission Data							
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subcategory: AIRVIEW	SS/FFP	WHS/AD : Arlington, VA	-	2.242	May 2018	0.800	Nov 2018	-		-		-	0.000	3.042	3.042
Subtotal			-	2.870		1.280		-		-		-	0.000	4.150	N/A
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Cost Capability analysis (CCA) with Force-on-Force Campaign Analysis (FCA)	SS/Various	Various : Various	-	-		0.330		-		-		-	0.000	0.330	0.330
Subcategory: Fusion Test Bed Red Model Support	C/BPA	GSA - Great Lakes : Fairborn, OH	1.307	-		-		-		-		-	0.000	1.307	1.307
Subtotal			1.307	-		0.330		-		-		-	0.000	1.637	N/A
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Cost Capability Analysis with Force-on-Force Campaign Analysis	SS/CR	AFLCMC/AZS : Hanscom AFB, MA	0.306	1.429	May 2018	0.400	Oct 2018	-		-		-	0.000	2.135	2.135
Enterprise-wide Source Data Access	SS/CR	US Army CECOM : APG, MD	-	0.310	Jan 2018	-		-		-		-	0.000	0.310	0.310
Other	Various	Various : Various	0.392	1.100	May 2018	-		-		-		-	0.000	1.492	1.492
Subtotal			0.698	2.839		0.400		-		-		-	0.000	3.937	N/A
Project Cost Totals			13.485	13.086		6.889		-		-		-	0.000	33.460	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Office of the Secretary Of Defense **Date:** February 2019

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FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
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

<i>Intelligence Mission Data (IMD) Automation</i>	
Concept/Architecture Analysis	██████████
EWIR IMD Automation Prototyping	██████████
End-to-End Data Flow Demonstrations	
<i>Cost Capability Analysis (CCA) with Force-on-Force Campaign Analysis (FCA)</i>	
Pilot Single-Platform and Multi-Platform Concepts	██████████
Execute IMD Sufficiency Analysis for Single-platform Environment	
Develop Additional Models and Scenarios in the FCA Environment	
Execute IMD Sufficiency Analysis for FCA	
<i>Enterprise-wide Source Data Access</i>	
Electronic Warfare Database Accessibility Enhancement Pilot Project	██████████
IMD Databases Content Management (CM) Application Programming Interfaces (APIs) Pilot	
<i>Other (all funding FY17 or FY18)</i>	
Acquisition Intelligence Workforce Training Course Development	
Acquisition Intelligence Manpower Analysis/Assessment	
Develop Dashboard for Intelligence Data Requirements and Production Planning	

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Office of the Secretary Of Defense **Date:** February 2019

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0307577D8Z / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 715 / <i>Intelligence Mission Data</i>
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FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
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

<i>Intelligence Mission Data (IMD) Automation</i>	
Concept/Architecture Analysis	
EWIR IMD Automation Prototyping	
End-to-End Data Flow Demonstrations	
<i>Cost Capability Analysis (CCA) with Force-on-Force Campaign Analysis (FCA)</i>	
Pilot Single-Platform and Multi-Platform Concepts	
Execute IMD Sufficiency Analysis for Single-platform Environment	
Develop Additional Models and Scenarios in the FCA Environment	
Execute IMD Sufficiency Analysis for FCA	
<i>Enterprise-wide Source Data Access</i>	
Electronic Warfare Database Accessibility Enhancement Pilot Project	
IMD Databases Content Management (CM) Application Programming Interfaces (APIs) Pilot	
<i>Other (all funding FY17 or FY18)</i>	
Acquisition Intelligence Workforce Training Course Development	
Acquisition Intelligence Manpower Analysis/Assessment	
Develop Dashboard for Intelligence Data Requirements and Production Planning	

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Office of the Secretary Of Defense		Date: February 2019
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0307577D8Z / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 715 / <i>Intelligence Mission Data</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Intelligence Mission Data (IMD) Automation</i>				
Concept/Architecture Analysis	4	2017	4	2018
EWIR IMD Automation Prototyping	4	2017	3	2020
End-to-End Data Flow Demonstrations	2	2019	4	2020
<i>Cost Capability Analysis (CCA) with Force-on-Force Campaign Analysis (FCA)</i>				
Pilot Single-Platform and Multi-Platform Concepts	4	2017	3	2019
Execute IMD Sufficiency Analysis for Single-platform Environment	2	2019	3	2019
Develop Additional Models and Scenarios in the FCA Environment	3	2018	2	2020
Execute IMD Sufficiency Analysis for FCA	2	2019	2	2020
<i>Enterprise-wide Source Data Access</i>				
Electronic Warfare Database Accessibility Enhancement Pilot Project	3	2017	3	2018
IMD Databases Content Management (CM) Application Programming Interfaces (APIs) Pilot	2	2018	1	2021
<i>Other (all funding FY17 or FY18)</i>				
Acquisition Intelligence Workforce Training Course Development	2	2018	2	2019
Acquisition Intelligence Manpower Analysis/Assessment	2	2018	4	2018
Develop Dashboard for Intelligence Data Requirements and Production Planning	1	2018	1	2020