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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	-	5.717	8.614	6.277	0.000	6.277	6.591	6.467	6.939	3.571	Continuing	Continuing
675306: <i>Analysis Enterprise</i>	-	1.337	7.820	6.277	0.000	6.277	6.591	6.467	6.939	3.571	Continuing	Continuing
675307: <i>TARGETING ENTERPRISE RESEARCH</i>	-	4.380	0.794	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Intelligence Mission Data (IMD) encompasses several key intelligence data efforts used to support IMD-dependent programs, including the fifth generation aircraft capabilities. The term IMD encompasses Red (adversary military systems), White (commercial systems), Blue (U.S. military systems), and Grey (neutral military systems) Characteristics & Performance; Signatures; Geospatial Intelligence; Electronic Warfare systems and Operational Order of Battle mission data. Supports fighter/ bomber operational reconnaissance and integration, focusing on leveraging fifth generation aircraft capabilities to augment the entire Combat Air Force. The PE funds: Planning & direction, collection, processing & exploitation, analysis & production, and dissemination & Evaluation (PCPAD-E) to support IMD-dependent programs.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	4.117	8.614	7.768	0.000	7.768
Current President's Budget	5.717	8.614	6.277	0.000	6.277
Total Adjustments	1.600	0.000	-1.491	0.000	-1.491
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	1.600	0.000	-1.491	0.000	-1.491

Change Summary Explanation

The FY 2021 funding request was reduced by \$1.491 million to account for the availability of prior year execution balances

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 675306 / <i>Analysis Enterprise</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
675306: <i>Analysis Enterprise</i>	-	1.337	7.820	6.277	0.000	6.277	6.591	6.467	6.939	3.571	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

In FY 2018, PE 0207431F, Combat Air Intelligence Systems, Intelligence Mission Data efforts were transferred to new for 2018 PE 0307577F, Intelligence Mission Data (IMD), in order to provide better oversight of IMD research and development. (+\$5.074M)

Intelligence Mission Data efforts in BPAC 675306 fund RDT&E to enable Advanced Non-cooperative Target Recognition (NCTR) collection, Operational Reconnaissance and traditional ELINT capabilities, advanced all-source analysis and production of IMD across EWIR, C&P, and Signatures to enable combat ID and ensure survivability for air superiority and global strike platforms.

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

	FY 2019	FY 2020	FY 2021
Title: NCTR Collection and IMD Production Tools	1.337	7.820	6.277
Description: Development of MASINT collection systems, creation of automated tools to process ELINT data, and development of improved analysis, production, and dissemination tools to create IMD used for combat ID.			
FY 2020 Plans: Continue development of automated tools to disseminate measurement and signatures information, EWIR, C&P including developing and integrating automation machine learning to develop, document, and deliver models of advanced threat systems.			
FY 2021 Plans: Continue development of automated tools.			
FY 2020 to FY 2021 Increase/Decrease Statement: Increased contract costs.			
Accomplishments/Planned Programs Subtotals	1.337	7.820	6.277

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

Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
• 030577F: <i>Intelligence Mission Data</i>	0.606	0.000	0.476	-	0.476	0.000	0.000	-	-	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 675306 / <i>Analysis Enterprise</i>

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

D. Acquisition Strategy

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 675306 / <i>Analysis Enterprise</i>
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Product Development	C/CPAF	Not specified. : TBD	-	-		-		-		-		-	Continuing	Continuing	-
NCTR Collection and IMD Production Tools Development	Various	NASIC : WPAFB, OH	-	1.337	Mar 2019	7.820	Feb 2020	6.277	Feb 2021	-		6.277	Continuing	Continuing	-
Subtotal			-	1.337		7.820		6.277		-		6.277	Continuing	Continuing	N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		-	1.337	7.820	6.277	-	6.277	Continuing	Continuing	N/A

Remarks
Contract award is expected 90 days after budget authority for FY18. FY19 will be one year after FY18.

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 675306 / <i>Analysis Enterprise</i>

	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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>NCTR and IMD Tool Development</i>																												
NCTR sensor dev start	████████████████																											
SIGINT/EWIR Tools Development			████████████████████████████████████████																									
SIGNATURE Tool Development	████████████████				████████████████				████████████████				████████████████				████████████████				████████████████							
C&P Tool Development			████████████████████████████████████████																									

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 675306 / <i>Analysis Enterprise</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>NCTR and IMD Tool Development</i>				
NCTR sensor dev start	1	2019	3	2020
SIGINT/EWIR Tools Development	3	2019	3	2023
SIGNATURE Tool Development	1	2019	3	2023
C&P Tool Development	3	2019	3	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force										Date: February 2020		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>				Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
675307: <i>TARGETING ENTERPRISE RESEARCH</i>	-	4.380	0.794	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2018, PE 0207431F, Combat Air Intelligence Systems, Intelligence Mission Data efforts were transferred to the new PE 37577F for 2018, Intelligence Mission Data (IMD), in order to provide better oversight of IMD research and development.

A. Mission Description and Budget Item Justification

In FY 2018, PE 0207431F, Combat Air Intelligence Systems, Intelligence Mission Data efforts were transferred to new for 2018 PE 0307577F, Intelligence Mission Data (IMD), in order to provide better oversight of IMD research and development. (+\$5.074M)
 Intelligence Mission Data efforts in BPAC 675307, Targeting Enterprise Research, fund RDT&E for Operational Reconnaissance Capabilities; Tactical Data Recorder; Advanced Non-cooperative Target Recognition (NCTR) Collection.
 These tools enable the collection, storage, and dissemination of Ops Recce data gathered during operational missions by currently fielded air platforms. In addition, the Advanced NCTR collection sensor supports CAF-wide requirements for improved ID capabilities.

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

	FY 2019	FY 2020	FY 2021
Title: Operational Reconnaissance Electronic Warfare Capabilities	4.380	0.794	0.000
Description: RDT&E efforts to develop recording, storage, and dissemination systems for Ops Recce data gathered during operational missions.			
FY 2020 Plans: Will continue RDT&E efforts to develop recording, storage, and dissemination systems for Ops Recce data gathered during non-ISR operational missions. These include but are not limited to data off-boarding and radar warning receiver performance assessment.			
FY 2021 Plans: Will continue RDT&E efforts to develop recording, storage, and dissemination systems for Ops Recce data gathered during non-ISR operational missions. These include but are not limited to data off-boarding and radar warning receiver performance assessment.			
FY 2020 to FY 2021 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
Funding decrease to 0 in FY21 due to higher Air Force priorities.			
Accomplishments/Planned Programs Subtotals	4.380	0.794	0.000

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

Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
• OPAF 03 Line Item 832070: <i>Intelligence Comm Equipment</i>	0.606	0.000	0.514	-	0.514	0.000	0.000	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

Capabilities will be developed and integrated onto various platforms using an incremental acquisition approach. The projects will be executed, contracting with appropriate vendor(s) to deliver capability while encouraging competition where possible.

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</i>

	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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>Ops Recce Projects</i>																												
Ops Recce Projects																												
Data Offboarding																												
Data Offboarding - Analysis																												
Data Offboarding Demo																												
Sensor Development																												
Sensor Development - SW Development																												
Sensor Development - Demo and Analysis																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Ops Recce Projects</i>				
Ops Recce Projects	2	2019	4	2020
Data Offboarding	2	2019	4	2020
Data Offboarding - Analysis	2	2019	4	2020
Data Offboarding Demo	4	2019	4	2020
Sensor Development	2	2019	4	2020
Sensor Development - SW Development	2	2019	2	2020
Sensor Development - Demo and Analysis	2	2019	4	2020