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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2022 Air Force **Date:** May 2021

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605712F / <i>Initial Operational Test &amp; Evaluation</i>
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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	-	13.288	13.532	12.582	0.000	12.582	-	-	-	-	-	-
660191: <i>Initial Operational Test and Eval</i>	-	13.288	13.532	12.582	0.000	12.582	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

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

The program element funds the Air Force Operational and Test Center (AFOTEC) to conduct Congressionally mandated Initial Operational Test and Evaluation (IOT&E) to support major weapon system acquisition decisions beyond Low-Rate Initial Production (LRIP), Milestone C, full rate production, fielding, and declaration of Initial Operational Capability (IOC). For Major Defense Acquisition Programs (MDAP), the law requires IOT&E be completed under realistic operating conditions before proceeding beyond LRIP. IOT&E is planned to answer all critical operational issues (COI) as thoroughly as possible. IOT&E is conducted to determine the operational effectiveness and suitability, and resolve overall mission capability, of systems undergoing research and development (R&D) efforts. It is an evaluation of a system's performance when the complete system is tested and evaluated against operational criteria by personnel with the same qualifications as those who will operate, maintain and support the system when deployed. In general, IOT&E is performed on new systems in development, major modifications, and other systems as directed. This PE also funds participation in Multiservice Operational Test and Evaluation (MOT&E), and Follow-on Operational Test and Evaluation (FOT&E) when it is the continuation of IOT&E activities past the full rate production decision. FOT&E answers specific questions about unresolved COIs and test issues or completes areas not finished during the IOT&E. Lastly, this PE funds related operational test and evaluation (OT&E) activities such as conducting Early Influence, agile release tests, Integrated Test and Evaluation (IT&E), Operational Utility Evaluations (OUE), Early Operational Assessments (EOA), and Operational Assessments (OA). These tests support releases and major milestones and decision points prior to Milestone C, full rate production, fielding, or declaration of IOC. IOT&E programs are identified in four system categories: Air; Weapons; Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR); and Combat Support. This program element is driven by Congressional and DoD acquisition mandated requirements for operational testing. AFOTEC schedules and executes tests according to the forecasted test readiness of the MDAP program offices.

This program is in Budget Activity 6, RDT&E Management Support because this budget activity includes research, development, test and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	13.793	13.557	14.233	0.000	14.233
Current President's Budget	13.288	13.532	12.582	0.000	12.582
Total Adjustments	-0.505	-0.025	-1.651	0.000	-1.651
• Congressional General Reductions	0.000	-0.025			
• 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	-0.505	0.000			
• Other Adjustments	0.000	0.000	-1.651	0.000	-1.651

**Change Summary Explanation**

In FY22, the Department of the Air Force transferred \$1.5 million of AFOTEC funding for testing of space programs to the United States Space Force (USSF) program, Major T&E Investment- Space, 1206759SF.

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Air Systems OT&E	0.887	6.400	7.417
<b>Description:</b> Plan, execute and report OT&E for Air Systems			
<b>FY 2021 Plans:</b>			
-Airborne Warning and Control System (AWACS) Block 40/45: Conduct FOT&E			
-B-52 Commercial Engine Replacement Program (B-52 CERP): Conduct early influence			
-B-52 Radar Modernization Program (B-52 RMP): Plan for OA			
-Combat Rescue Helicopter (CRH): Conduct IOT&E			
-F-15 Eagle Passive and Active Warning and Survivability System (F-15 EPAWSS): Plan for IOT&E			
-F-15EX: Conduct agile release tests			
-F-22 Capability Pipeline: Conduct agile release tests			
-Global Hawk Ground Segment Modernization Program GH GSMP): Plan for IOT&E			
-KC-46A: Complete IOT&E			
-MH-139: Plan for IOT&E			
-RQ-4B Global Hawk Block 30 Multi-Spectral Intelligence (MSI): Plan for IOT&E			
-T-7A: Plan for OA			
-VC-25B: Conduct OA			

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<p>-Conduct other planning and operational testing for new air system programs as the requirement becomes known to AFOTEC</p> <p><b>FY 2022 Plans:</b></p> <ul style="list-style-type: none"> <li>-Airborne Warning and Control System (AWACS) Block 40/45: Complete FOT&amp;E</li> <li>-B-52 Commercial Engine Replacement Program (B-52 CERP): Plan for OUE</li> <li>-B-52 Radar Modernization Program (B-52 RMP): Conduct OA</li> <li>-Combat Rescue Helicopter (CRH): Complete IOT&amp;E</li> <li>-F-15 Eagle Passive and Active Warning and Survivability System (F-15 EPAWSS): Conduct IOT&amp;E</li> <li>-F-15EX: Conduct agile release tests</li> <li>-F-22 Capability Pipeline: Conduct agile release tests</li> <li>-Global Hawk Ground Segment Modernization Program GH GSMP): Conduct IOT&amp;E</li> <li>-MH-139: Conduct IOT&amp;E</li> <li>-RQ-4B Global Hawk Block 30 Multi-Spectral Intelligence (MSI): Conduct IOT&amp;E</li> <li>-T-7A: Conduct OA</li> <li>-VC-25B: Conduct OA 2</li> </ul> <p>-Conduct other planning and operational testing for new air system programs as the requirement becomes known to AFOTEC</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase in test requirements</p>				
<p><b>Title:</b> Space Systems OT&amp;E</p> <p><b>Description:</b> Plan, execute and report OT&amp;E for Space Systems</p> <p><b>FY 2021 Plans:</b></p> <ul style="list-style-type: none"> <li>-Air Force and Army Anti-jam Modem (A3M): Conduct agile release tests</li> <li>-Advanced Extremely High Frequency Satellite Communications (Advanced EHF): Plan for FOT&amp;E</li> <li>-Deep Space Advanced Radar Concept (DARC): Conduct agile release tests</li> <li>-Enhanced Polar System Recapitalization (EPS-R): Conduct early influence</li> <li>-Evolved Strategic SATCOM (ESS): Conduct early influence</li> <li>-Family of Advanced Beyond Line Of Sight Terminals (FAB T): Plan for FOT&amp;E</li> <li>-Military GPS User Equipment (GPS MGUE): Conduct OUE 1/2</li> <li>-GPS Next Generation Control Segment (GPS OCX): Conduct early influence</li> <li>-Integrated Strategic Planning and Analysis Network Increment 5 (ISPAN Inc 5): Conduct agile release tests</li> <li>-Long-Range Discrimination Radar (LRDR): Conduct IOT&amp;E</li> <li>-Next-Generation Overhead Persistent Infrared (Next-Gen OPIR): Conduct agile release tests</li> </ul>		2.737	1.460	0.000

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<ul style="list-style-type: none"> <li>-Nuclear Planning and Execution System Recapitalization (NPES): Conduct OA</li> <li>-Presidential and National Voice Conferencing (PNVC): Plan for MOT&amp;E</li> <li>-Protected Tactical Enterprise Service (PTES): Conduct MOT&amp;E</li> <li>-Protected Tactical SATCOM (PTS): Conduct EOA</li> <li>-Space Based Infrared System (SBIRS): Conduct early influence</li> <li>-Space C2: Conduct IOT&amp;E</li> <li>-Weather System Follow-On Microwave (WSF-M): Plan for OA</li> <li>-Conduct other planning and operational testing for new space system programs as the requirement becomes known to AFOTEC</li> </ul> <p><b>FY 2022 Plans:</b> NA. In FY22, the DAF transferred AFOTEC funding for testing of Space programs to USSF program, Major T&amp;E Investment - Space, 1206759SF.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$1.5 million due to transfer of funding from AF to USSF.</p>				
<p><b>Title:</b> Weapons Systems OT&amp;E</p> <p><b>Description:</b> Plan, execute and report OT&amp;E for Weapons Systems</p> <p><b>FY 2021 Plans:</b></p> <ul style="list-style-type: none"> <li>-AIM 120D System Improvement Program 3 (AIM-120D SIP-3): Conduct MOT&amp;E</li> <li>-AIM-9X Block II 9.4xx (AIM-9X Blk II 9.4xx): Complete FOT&amp;E</li> <li>-Air Launched Rapid Response Weapon (ARRW): Conduct agile release tests</li> <li>-Golden Horde: Conduct agile release tests</li> <li>-JDAM M-Code: Conduct agile release tests</li> <li>-Conduct other planning and operational testing for new weapons system programs as the requirement becomes known to AFOTEC</li> </ul> <p><b>FY 2022 Plans:</b></p> <ul style="list-style-type: none"> <li>-Air Launched Rapid Response Weapon (ARRW): Conduct agile release tests</li> <li>-Golden Horde: Conduct agile release tests</li> <li>-JDAM M-Code: Conduct agile release tests</li> <li>-Conduct other planning and operational testing for new weapons system programs as the requirement becomes known to AFOTEC</li> </ul> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b></p>		2.772	0.588	0.182

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Decrease in test requirements				
<b>Title:</b> C4ISR Systems OT&E		6.497	4.021	4.901
<b>Description:</b> Plan, execute and report OT&E for C4ISR Systems				
<b>FY 2021 Plans:</b> -Air Force Integrated Personnel and Pay System (AFIPPS): Plan for IOT&E -Air Operations Center Weapon System Modification Program (AOC WS Mod): Conduct agile release tests -Distributed Common Ground System (DCGS): Conduct 4 OUEs -Force Element Terminal (FET): Conduct agile release tests -Integrated Strategic Planning and Analysis Network Increment 5 (ISPAN Inc 5): Conduct agile release tests -Joint Cyber Command and Control (JCC2): Conduct agile release tests -Nuclear Planning and Execution System Recapitalization (NPES): Conduct OA -RQ-4 Global Hawk Block 30/Airborne Signals Intelligence Payload (ASIP): Conduct FOT&E -Survivable Airborne Operations Center (SAOC): Conduct agile release tests -Three Dimensional Expeditionary Long Range Radar (3DELRR): Plan for IOT&E -Unified Platform (UP): Conduct agile release tests -Wide Area Surveillance (WAS): Conduct IOT&E -Conduct other planning and operational testing for new C4ISR programs as the requirement becomes known to AFOTEC				
<b>FY 2022 Plans:</b> -Air Force Integrated Personnel and Pay System (AFIPPS): Conduct IOT&E -Air Operations Center Weapon System Modification Program (AOC WS Mod): Conduct agile release tests -Integrated Strategic Planning and Analysis Network Increment 5 (ISPAN Inc 5): Conduct agile release tests -Joint Cyber Command and Control (JCC2): Conduct agile release tests -Nuclear Planning and Execution System Recapitalization (NPES): Conduct OA -Survivable Airborne Operations Center (SAOC): Conduct agile release tests -Three Dimensional Expeditionary Long Range Radar (3DELRR): Conduct IOT&E -Unified Platform (UP): Conduct agile release tests -Wide Area Surveillance (WAS): Conduct FOT&E -Conduct other planning and operational testing for new C4ISR programs as the requirement becomes known to AFOTEC				
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase in test requirements				
<b>Title:</b> Combat Support OT&E		0.395	1.063	0.082

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<p><b>Description:</b> Plan, execute and report OT&amp;E for Combat Support OT&amp;E</p> <p><b>FY 2021 Plans:</b></p> <ul style="list-style-type: none"> <li>-Common Munitions Built-In Test Reprogramming Equipment Service Life Extension Program (CMBRE SLEP): Conduct early involvement</li> <li>-Deliberate and Crisis Action Planning and Execution Segments Increment 2B (DCAPES Inc 2B): Conduct agile release tests</li> <li>-Military GPS User Equipment Inc 2 Handheld (MGUE Inc 2 HH): Conduct early involvement</li> <li>-Maintenance, Repair, and Overhaul Initiative (MROI): Conduct IOT&amp;E</li> <li>-Conduct other planning and operational testing for new combat support programs as the requirement becomes known to AFOTEC</li> </ul> <p><b>FY 2022 Plans:</b></p> <ul style="list-style-type: none"> <li>-Common Munitions Built-In Test Reprogramming Equipment Service Life Extension Program (CMBRE SLEP): Plan for OUE</li> <li>-Deliberate and Crisis Action Planning and Execution Segments Increment 2B (DCAPES Inc 2B): Conduct agile release tests</li> <li>-Military GPS User Equipment Inc 2 Handheld (MGUE Inc 2 HH): Conduct early involvement</li> <li>-Maintenance, Repair, and Overhaul Initiative (MROI): Conduct FOT&amp;E</li> <li>-Conduct other planning and operational testing for new combat support programs as the requirement becomes known to AFOTEC</li> </ul> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease in test requirements</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	13.288	13.532	12.582

**D. Other Program Funding Summary (\$ in Millions)**  
N/A

**Remarks**

**E. Acquisition Strategy**  
N/A