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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2023 Air Force **Date:** April 2022

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0207247F / AF TENCAP
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	21.605	23.685	23.309	0.000	23.309	25.691	23.828	24.330	24.872	Continuing	Continuing
670001: <i>Air Force TENCAP</i>	-	21.605	23.685	23.309	0.000	23.309	25.691	23.828	24.330	24.872	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Air Force Tactical Exploitation of National Capabilities (TENCAP) increases warfighter effectiveness through the exploitation of national capabilities and promotes cross-domain integration of these capabilities into military operations/training and intelligence, surveillance and reconnaissance (ISR) activities.

AF TENCAP exploits existing air, space, cyber, national and global ISR, and Non-Traditional ISR (NTISR) for operational and tactical applications by rapidly prototyping and providing capability demonstrations. Projects are designed to transition to warfighters or national intelligence agencies for operational use, and to appropriate acquisition Programs of Record for sustainment and further development. AF TENCAP projects influence the design and operation of current and future air, space, cyber, national and global ISR, and NTISR systems while providing situational awareness to warfighters, national intelligence agency organizations, and units. AF TENCAP projects will begin an evolution to demonstrate prototype capabilities to accelerate Joint All-Domain Command and Control prototyping efforts into a single Common Operational Picture. AF TENCAP projects also support acceleration of capability development for USINDOPACOM operational plans.

The program consists of multiple small projects supporting the Air Force Warfighting Integration Capability. Projects are executed to provide continued support to Special Operations Forces and the Air Force warfighter, with impacts at the national, operational, and tactical levels.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In PY22 \$00.000M was expended for civilian pay expenses in this program element, and in CY23 \$00.000M is forecasted for civilian pay expenses in this program element.

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.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
Previous President's Budget	18.820	23.685	0.000	0.000	0.000
Current President's Budget	21.605	23.685	23.309	0.000	23.309
Total Adjustments	2.785	0.000	23.309	0.000	23.309
• 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	2.785	0.000	23.309	0.000	23.309

**Change Summary Explanation**

FY2021: The correct amount for FY2021 is 21.605M. There was an error in the XML database when data transferred from PRCP to IDECS incorrectly putting the FY21 amount at 18.820. Based on the approved FY2021 PB, the TENCAP PE was distributed the correct value of 21.605M.

FY2023: The FY2022 President's Budget submittal did not reflect FY2023 through FY2026 funding. Therefore, an explanation of the change between the two budget positions for FY2023 cannot be made in a relevant manner.

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

	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<b>Title:</b> Exploitation Applications	14.932	12.935	10.809	0.000	10.809
<b>Description:</b> Exploiting existing air, space, cyber, national and global ISR, and Non-Traditional ISR (NTISR) for operational and tactical applications by rapidly prototyping and demonstrating capabilities. National capabilities are exploited to deliver rapid, cost-dominant and innovative warfighting solutions. Project activities (Talons) support Intelligence Surveillance and Reconnaissance requirements, the application of combat effects; Battlespace Awareness and Command and Control; and support to Special Operations Forces, Personnel Recovery and Close Air Support. Activities also influence the design and operation of future space, cyber, national and global ISR, and NTISR systems for tactical users.					
<b>FY 2022 Plans:</b>					
- Continues to rapidly prototype projects and focus warfighter support and resource allocation based on AF TENCAP mission/investment areas					

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>					
<p>- Continues focused efforts to increase Air Domain Awareness and Command and Control; support to Special Operations Forces; and support to ISR and Combat Applications to meet Air Force and Joint Warfighter requirements.</p> <p><b>FY 2023 Base Plans:</b> - Will continue to rapidly prototype projects and focus warfighter support and resource allocation based on AF TENCAP mission/investment areas</p> <p>- Will continue focused efforts to increase Air Domain Awareness and Command and Control; support to Special Operations Forces; and support to ISR and Combat Applications to meet Air Force and Joint Warfighter requirements.</p> <p><b>FY 2023 OCO Plans:</b> None.</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Funding decrease to account for the availability of prior year execution balances.</p>					
<p><b>Title:</b> Talon CRESTONE</p> <p><b>Description:</b> TALON CRESTONE provides C-UAS capability in support of CENTCOM JUONS 558 &amp; 576. Capability will be employed from CENTCOM airborne platforms and payloads will be controlled via a remote central server. This effort leverages existing National &amp; Tactical technology and networks focused on the highest priority threats in CENTCOM. Initial fielding by Fall 2021.</p> <p><b>FY 2022 Plans:</b> Talon CRESTONE begins transition activities to support handoff of the C-UAS capability to the program of record in support of CENTCOM JUONS 558 &amp; 576. Funding will bridge transition to Program of Record and support critical integration and test within CENTCOM theater of operations.</p> <p><b>FY 2023 Base Plans:</b> Talon CRESTONE will continue transition activities of the C-UAS capability to the program of record in support of CENTCOM JUONS 558 &amp; 576. Funding will acquire additional payloads and continue support of critical integration and test within CENTCOM theater of operations, as well as support transition to Special Signals Branch (AFLCMC/WIN).</p> <p><b>FY 2023 OCO Plans:</b></p>					
	2.850	3.000	7.000	0.000	7.000

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
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None.					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Talon CRESTONE will acquire additional payloads and support critical integration and test within CENTCOM theater of operations.					

<p><b>Title:</b> Talon POWDERHORN</p> <p><b>Description:</b> TALON POWDERHORN (previously Talon OMNIA) is a project to incorporate multi-domain Maritime and Air blue force data into the THRESHER common operational picture. TENCAP will develop architectures for blue force location and status data to inform decision makers on the AF JADC2 Awareness and Battle Management operational and tactical pictures. Talon POWDERHORN, will continue to develop methodologies and architectures to ingest blue force location and status data to provide decision makers blue force courses of action during force employment. Includes integration into THRESHER Program of Record (All Domain Awareness tool).</p> <p><b>FY 2022 Plans:</b></p> <ul style="list-style-type: none"> <li>- Talon POWDERHORN continues to accelerate integration of air and maritime blue force data into a single interface and demonstrate a prototype of Blue Force Air and Maritime Domain Awareness capabilities.</li> <li>- Continues to develop methodologies and architectures to ingest blue force location and status data to provide decision makers blue force courses of action during force employment.</li> </ul> <p><b>FY 2023 Base Plans:</b></p> <ul style="list-style-type: none"> <li>- Talon POWDERHORN will continue to accelerate integration of air and maritime blue force data into a single interface and demonstrate a prototype of Blue Force Air and Maritime Domain Awareness capabilities.</li> <li>- Will continue to develop methodologies and architectures to ingest blue force location and status data to provide decision makers blue force courses of action during force employment.</li> </ul> <p><b>FY 2023 OCO Plans:</b> None.</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b></p>	0.123	2.000	0.500	0.000	0.500
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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>					
	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
Talon POWDERHORN will complete major development tasks and start transition activities associated with moving developed capabilities into associated programs of record.					
<b>Title:</b> Talon 6A					
<b>Description:</b> Talon 6A is a technology prototype to design, build, demonstrate a long-range passive ionospheric modeling research system to examine wide-area operational surveillance and assess airborne platform survivability. Effort will leverage National and Allied technologies.					
<b>FY 2022 Plans:</b> Completes rapid prototype development of ionospheric system at site 1. Will start transition activities to provide an initial operational capability. Begin planning activities for installation at site 2. Will continue to examine wide-area operational surveillance and assess airborne platform survivability in partnership with National and Allied partners.					
<b>FY 2023 Base Plans:</b> Will continue transition activities of ionospheric system at site 1 and begin site preparation and development of second system at site 2. Work with National and Allied partners to integrate separate sites into prototype network. Continue IOC activities at completed sites.					
<b>FY 2023 OCO Plans:</b> None.					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Will continue transition activities at site 1 and begin development activities at site 2.					
	2.000	0.750	1.000	0.000	1.000
<b>Title:</b> Talon PHOENIX					
<b>Description:</b> Talon PHOENIX is an effort to develop distributed SAP mission planning for 5th Generation and beyond.					
<b>FY 2022 Plans:</b> Continues to develop distributed SAP mission planning for 5th Generation communities and begin prototype testing capabilities.					
<b>FY 2023 Base Plans:</b>					
	1.700	5.000	4.000	0.000	4.000

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Will continue development of distributed SAP mission planning for 5th Generation communities. Demonstrate capability through prototype testing events and begin transition of capability to appropriate programs of record.  <b>FY 2023 OCO Plans:</b> None.  <b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Transition of project from development into test and delivery of demonstrated capabilities.					
<b>Accomplishments/Planned Programs Subtotals</b>	21.605	23.685	23.309	0.000	23.309

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

**Remarks**  
N/A

**E. Acquisition Strategy**  
Projects are selected based upon needs identified by the program's customers - DOD Departments, Combatant Commands, Components, MAJCOMs, and/or National Intelligence Agencies. Many projects are executed via existing contracts maintained by other agencies; others are executed via AF TENCAP contracts established with vendors responding to annual Broad Agency Announcements. The U.S. Government organization sponsoring a project is responsible for assuming acquisition, deployment, logistics, sustainment and budgetary responsibilities for the developed capability after it has been successfully demonstrated by AF TENCAP.

AF TENCAP projects typically use an incremental acquisition strategy. AF TENCAP utilizes a disciplined systems engineering approach that allows program teams to solve problems through a series of segments. Each increment has to be successful to pursue the following segment which mitigates cost and schedule risk.

Contracts funded in this program element will be awarded using competitive procedures to the maximum extent possible.



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**Exhibit R-4, RDT&E Schedule Profile: PB 2023 Air Force** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207247F / AF TENCAP	<b>Project (Number/Name)</b> 670001 / Air Force TENCAP
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	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	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

<b>AF TENCAP Projects</b>																												
FY 2020 Exploitation Applications Developed, Evaluated, and Released																												
FY 2021 Exploitation Applications Developed, Evaluated, and Released																												
FY 2022 Exploitation Applications Developed, Evaluated, and Released																												
FY 2023 Exploitation Applications Developed, Evaluated, and Released																												
Talon CRESTONE																												
Talon POWEDERHON																												
Talon 6A																												
Talon PHOENIX																												

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2023 Air Force **Date:** April 2022

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207247F / AF TENCAP	<b>Project (Number/Name)</b> 670001 / Air Force TENCAP
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>AF TENCAP Projects</b>				
FY 2020 Exploitation Applications Developed, Evaluated, and Released	1	2021	3	2021
FY 2021 Exploitation Applications Developed, Evaluated, and Released	1	2021	3	2022
FY 2022 Exploitation Applications Developed, Evaluated, and Released	1	2022	3	2023
FY 2023 Exploitation Applications Developed, Evaluated, and Released	1	2023	3	2024
Talon CRESTONE	1	2021	2	2024
Talon POWEDERHON	1	2021	4	2024
Talon 6A	1	2021	4	2025
Talon PHOENIX	1	2021	4	2023

**Note**

Most project selection activities occur approximately per the timelines shown, but some projects are initiated on a rolling basis throughout each year in response to time-sensitive operational requirements.