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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2024 Air Force **Date:** March 2023

<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 0207697F / <i>Distributed Training and Exercises</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	3.860	4.624	3.811	0.000	3.811	4.838	4.960	5.061	5.244	Continuing	Continuing
675190: <i>JFCOM Wargaming</i>	-	3.860	4.624	3.811	0.000	3.811	4.838	4.960	5.061	5.244	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Funding supports the CSAF Title 10 wargaming efforts to test concepts, capabilities, programming choices, and plans using simulation and other techniques, otherwise known as wargaming. Based on the Department and Air Force direction, there is a concerted effort in these periods of fiscal restraint to reinvigorate, institutionalize, and systematize wargaming across the Department. This effort requires continued funding to maintain the level of effort to most effectively pursue an innovative strategy, avoid operational and technical surprise and make best use of limited resources. The Air Force continues to refine the wargame process and design to better integrate and synergize those efforts in support of the Air Force Strategy, Planning, Programming, Budget, and Execution (SPPBE) process. Specifically, in addition to maintaining a robust Title 10 Wargame series, Global Engagement, servicing Chief of Staff of the Air Force (CSAF) objectives. The HAF Wargaming Enterprise is executing on-call Wargaming in support of the AF/A5/7, the Agile series, along with quick-turning wargame support to the USAF Enterprise Capability Collaboration Team (ECCT) requirements, the Enterprise series, Plan Blue, and to service AF/A5/7 strategy and concept development objectives; all to better address the requirements of the Strategy, Planning, Programming, Budget, and Execution (SPPBE) process and cycles. Additionally, HAF Wargaming provides and coordinates Air Force representation at other Service and Joint wargames as they execute across the department. These efforts are providing decision support to senior Air Force leaders involving investment strategies and develop concepts to best employ U.S. forces in future conflicts.

The Wargame Information Environment (WIE) is a continually evolving system that provides an array of services to game players which enables the accomplishment of game objectives. The backbone of the WIE is GameNet, a deployable, standalone, Local Area Network (LAN) with servers and laptops that host applications to support virtual battlespace collaboration, decision making, three-dimensional visualizations & mapping, and services. Behind these applications are cutting edge technologies and database architectures from both commercial off-the-shelf and government developed software that assures relevance to the wargame. The modeling, simulation, and analysis applications allow participants, adjudicators, and control team members to effectively and efficiently collaborate, make decisions, present those decisions, and execute moves within the wargame; documenting each step in the process. This information capture enables discovery during the wargame and permits postgame analysis. These findings inform portfolio rebalancing exercises, concept and strategy development, and very senior leader decision making.

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 FY2022 \$0 was expended for civilian pay expenses in this program element, and in FY2023 \$0 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 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	4.007	4.628	4.722	0.000	4.722
Current President's Budget	3.860	4.624	3.811	0.000	3.811
Total Adjustments	-0.147	-0.004	-0.911	0.000	-0.911
• 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	-0.147	-0.004	-0.911	0.000	-0.911

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
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<b>Title:</b> Develop/ Upgrade Modeling & Simulation (M&S) Tools for Wargaming Information Environment (WIE)	1.560	1.770	1.624	0.000	1.624
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**Description:** Develop air, space and cyber space wargaming specific functionality in existing modeling and simulation and analysis tools and integrate into the latest version of the WIE

**FY 2023 Plans:**

- Continue developing and assimilating state of the art tools that capture consequences of alternative force structures and capabilities employed in wargames to inform Department of the Air Force (DAF) budgeting and programming choices.
- Continue to expand and develop the Headquarters USAF (HAF) Wargaming Information Environment (WIE) by integrating the latest technology and tools that will support of a more flexible, robust, and agile wargaming enterprise that is quicker to respond and tailorable for a wider range of wargaming. This will require analysis of the utility and functionality of additional models and analytical tools used in other wargames, and creation of custom interfaces to allow interaction within the WIE (for example, the latest iteration of Air Force Materiel Command's Integrated Sustainment and Wargaming Analysis Toolkit (ISWAT3), which assesses and reports changing logistics and supply levels across wargame moves, battle damage, resupply etc.).
- Seek to improve the ease and effectiveness of wargame execution by developing new WIE visualizations and user/ participant interfaces in the FY23 HAF "Title 10" wargame series comprised of Futures Game 23 (FG 23)

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

and Global Engagement 23 (GE 23)—where FG is a high-classification deep-dive into capabilities 15-20 years out and GE is an Ally-informed look at military theater competition between now and that period.

***FY 2024 Base Plans:***

- Continue developing and assimilating state of the art tools that capture consequences of alternative force structures and capabilities employed in wargames to inform Department of the Air Force (DAF) budgeting and programming choices.

- Continue to expand and develop the Headquarters USAF (HAF) Wargaming Information Environment (WIE) by integrating the latest technology and tools that will support of a more flexible, robust, and agile wargaming enterprise that is quicker to respond and tailorable for a wider range of wargaming. This will require analysis of the utility and functionality of additional models and analytical tools used in other wargames, and creation of custom interfaces to allow interaction within the WIE (for example, the latest iteration of Air Force Materiel Command's Integrated Sustainment and Wargaming Analysis Toolkit (ISWAT3), which assesses and reports changing logistics and supply levels across wargame moves, battle damage, resupply etc.).

- Seek to improve the ease and effectiveness of wargame execution by developing new WIE visualizations and user/ participant interfaces in the FY23 HAF "Title 10" wargame series comprised of Futures Game 24 (FG 24) and Global Engagement 23 (GE 23)—where FG is a high-classification deep-dive into capabilities 15-20 years out and GE is an Ally-informed look at military theater competition between now and that period.

***FY 2024 OCO Plans:***

There are no OCO funds programmed or executed in this PE.

***FY 2023 to FY 2024 Increase/Decrease Statement:***

Increase between FY23 and FY24 is due to escalatory contract labor costs per the terms and conditions on FFP Labor costs.

***Title:*** Joint Concept Development & Experimentation (JCD&E) Tools

***Description:*** Develop scenarios and data for future synthetic environment that are grounded in truth to support several wargames and mini-wargames.

***FY 2023 Plans:***

- HAF Wargaming will execute FG 23 and GE 23 lead-up events in FY23.

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>and Global Engagement 23 (GE 23)—where FG is a high-classification deep-dive into capabilities 15-20 years out and GE is an Ally-informed look at military theater competition between now and that period.</p> <p><b><i>FY 2024 Base Plans:</i></b></p> <ul style="list-style-type: none"> <li>• Continue developing and assimilating state of the art tools that capture consequences of alternative force structures and capabilities employed in wargames to inform Department of the Air Force (DAF) budgeting and programming choices.</li> <li>• Continue to expand and develop the Headquarters USAF (HAF) Wargaming Information Environment (WIE) by integrating the latest technology and tools that will support of a more flexible, robust, and agile wargaming enterprise that is quicker to respond and tailorable for a wider range of wargaming. This will require analysis of the utility and functionality of additional models and analytical tools used in other wargames, and creation of custom interfaces to allow interaction within the WIE (for example, the latest iteration of Air Force Materiel Command's Integrated Sustainment and Wargaming Analysis Toolkit (ISWAT3), which assesses and reports changing logistics and supply levels across wargame moves, battle damage, resupply etc.).</li> <li>• Seek to improve the ease and effectiveness of wargame execution by developing new WIE visualizations and user/ participant interfaces in the FY23 HAF "Title 10" wargame series comprised of Futures Game 24 (FG 24) and Global Engagement 23 (GE 23)—where FG is a high-classification deep-dive into capabilities 15-20 years out and GE is an Ally-informed look at military theater competition between now and that period.</li> </ul> <p><b><i>FY 2024 OCO Plans:</i></b></p> <p>There are no OCO funds programmed or executed in this PE.</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b></p> <p>Increase between FY23 and FY24 is due to escalatory contract labor costs per the terms and conditions on FFP Labor costs.</p> <p><b><i>Title:</i></b> Joint Concept Development &amp; Experimentation (JCD&amp;E) Tools</p> <p><b><i>Description:</i></b> Develop scenarios and data for future synthetic environment that are grounded in truth to support several wargames and mini-wargames.</p> <p><b><i>FY 2023 Plans:</i></b></p> <ul style="list-style-type: none"> <li>• HAF Wargaming will execute FG 23 and GE 23 lead-up events in FY23.</li> </ul>					
	2.300	2.854	2.187	0.000	2.187

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<ul style="list-style-type: none"> <li>• HAF Wargaming will continue to design, develop models, research concepts, and conduct workshops for FG 23 and GE 23 including post-game assessment, analysis and reporting.</li> <li>• HAF Wargaming will continue to conduct quick-turn wargames in support of senior leaders as directed including support to other service wargames to ensure Air Force interests are incorporated in a realistic manner.</li> </ul> <p><b><i>FY 2024 Base Plans:</i></b></p> <ul style="list-style-type: none"> <li>• HAF Wargaming will execute FG 24 and GE 24 lead-up events in FY24.</li> </ul> <ul style="list-style-type: none"> <li>• HAF Wargaming will continue to design, develop models, research concepts, and conduct workshops for FG 24 and GE 24 including post-game assessment, analysis and reporting.</li> <li>• HAF Wargaming will continue to conduct quick-turn wargames in support of senior leaders as directed including support to other service wargames to ensure Air Force interests are incorporated in a realistic manner.</li> </ul> <p><b><i>FY 2024 OCO Plans:</i></b> There are no OCO funds programmed or executed in this PE.</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Increase between FY23 and FY24 is due to escalatory contract labor costs per the terms and conditions on FFP Labor costs.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	3.860	4.624	3.811	0.000	3.811

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

**Remarks**

**E. Acquisition Strategy**  
In order to achieve an innovative strategy, avoid operational and technical surprise and make best use of limited resources, wargaming requires an evolutionary acquisition approach for every wargame. Contract support is required as wargame and IT specialized expertise resides with industry and is not available organically. The requirements constantly evolve and a challenge to be accurately defined at the outset of the contract; however, we will continue to pursue a firm fixed price (FFP) contract awarded under a full and open competition.



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Air Force</b>		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207697F / <i>Distributed Training and Exercises</i>	<b>Project (Number/Name)</b> 675190 / <i>JFCOM Wargaming</i>

FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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><i>Wargaming Information Environment</i></b>	
Develop and Integrate M&S Tools	
Enhance ViewPoint	
Improve GamePoint	

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Air Force		<b>Date:</b> March 2023
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Wargaming Information Environment</i></b>				
Develop and Integrate M&S Tools	1	2022	4	2028
Enhance ViewPoint	1	2022	4	2028
Improve GamePoint	1	2022	4	2028