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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force **Date:** February 2018

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604200F / <i>Future Advanced Weapon Analysis & Programs</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	5.100	39.602	0.000	39.602	0.000	0.000	0.000	0.000	0.000	44.702
653133: <i>Armament Subsystems</i>	-	0.000	5.100	39.602	0.000	39.602	0.000	0.000	0.000	0.000	0.000	44.702
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Air Force Life Cycle Management Center, Armament Systems Development Division plans and executes early Systems Engineering and risk reduction activities to tailor weapons concepts and analysis for 2030+ Air Dominance Weapon System candidates. Results enable highly informed decisions on future weapons concepts to develop, refine, and integrate technologies into new weapons concepts to defeat evolving threat scenarios and environments. Technical risk reduction activities include Concept Development, Trade Studies, Model Development, Concept Experimentation, and demonstrative prototypes. Conducts early Modeling, Simulation, and Analysis (MS&A) of virtual systems, validated through integration of empirical data derived from prototypes and demonstrations. Plans and executes pre-AoA and AoA activities as directed by ACC and Global Strike Command to prepare for major program milestone decisions (MDD, MS-A, MS-B). Also includes institutional costs required for quick-reaction answers to activities listed above. Examples of such efforts include but are not limited to, Next Generation Strike Weapon (NGSW) Analysis of Alternatives and Long Range Engagement Weapon (LREW).

This program element may include necessary civilian pay expenses required to manage and execute these program activities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, and 0605898F.

BA5 - This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	5.100	0.000	0.000	0.000
Current President's Budget	0.000	5.100	39.602	0.000	39.602
Total Adjustments	0.000	0.000	39.602	0.000	39.602
• 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	0.000	0.000	39.602	0.000	39.602

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Change Summary Explanation

FY19 increase to continue Long Range Engagement Weapon

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

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Title: 2030AS Weapons</p> <p>Description: The 2030+ Air Dominance Weapon Systems candidate concepts will define, refine and integrate technologies into evolving threat scenarios and environments. Studies that refine system concepts and operational/system architectures to include family of systems and system of systems are required in support of the strategic choices. Included but not limited to effectiveness analyses, concept characterization, risk assessments, survivability analyses, mission and campaign analyses, and early acquisition planning. Technical risk reduction activities will be conducted to include experimentation, integration, and building demonstrative prototypes.</p> <p>Includes A&AS, travel, supplies, software, civilian pay and program costs.</p> <p>FY 2018 Plans: Define, refine and integrate technologies into evolving threat scenarios and environments. Studies that refine system concepts and operational/system architectures to include family of systems and system of systems are required in support of the strategic choices. Included but not limited to analysis of alternatives, effectiveness analyses, concept characterization, risk assessments, survivability analyses, mission and campaign analyses, and early acquisition planning. Technical risk reduction activities will be conducted to include experimentation, integration, and building demonstrative prototypes.</p> <p>FY 2019 Base Plans: Define, refine and integrate technologies into evolving threat scenarios and environments. Studies that refine system concepts and operational/system architectures to include family of systems and system of systems are required in support of the strategic choices. Included but not limited to analysis of alternatives, effectiveness analyses, concept characterization, risk assessments, survivability analyses, mission and campaign analyses, and early acquisition planning. Technical risk reduction activities will be conducted to include experimentation, integration, and building demonstrative prototypes.</p> <p>FY 2019 OCO Plans: N/A</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p>	0.000	5.100	39.602	0.000	39.602

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Increase in FY19 budget required to continue 2030 AS early systems engineering and technical risk reduction.					
Accomplishments/Planned Programs Subtotals	0.000	5.100	39.602	0.000	39.602

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

N/A

Remarks

E. Acquisition Strategy

Acquisition strategy is competitive prototyping; multiple vendors will be used to maximum extent possible.

F. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force **Date:** February 2018

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604200F / <i>Future Advanced Weapon Analysis & Programs</i>	Project (Number/Name) 653133 / <i>Armament Subsystems</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			
2030AS Development and Analysis	C/FFP	UKN : UKN	-	0.000		0.000		35.000	Oct 2018	0.000		35.000	Continuing	Continuing	-
Subtotal			-	0.000		0.000		35.000		0.000		35.000	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			
Program Mgmt Administration	Various	Various : Eglin AFB, FL	-	0.000		5.100		4.602		0.000		4.602	Continuing	Continuing	-
Subtotal			-	0.000		5.100		4.602		0.000		4.602	Continuing	Continuing	N/A

Remarks
Includes A&AS support plus IT requirements, TDY and office supplies.

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.000	5.100	39.602	0.000	39.602	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force		Date: February 2018
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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

2030 Air Dominance Weapon System	
Design, Engineering, Testing, Risk Reduction	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force		Date: February 2018
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
2030 Air Dominance Weapon System				
Design, Engineering, Testing, Risk Reduction	1	2018	4	2019