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

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 0804743F / <i>Other Flight Training</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	-	2.054	1.330	1.999	0.000	1.999	-	-	-	-	-	-
675304: <i>Aviation Resource Management System (ARMS)</i>	-	2.054	1.330	1.999	0.000	1.999	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Aviation Resource Management System (ARMS) is the authoritative data source for all aircrew and parachutist management (including flight and jump pay) covering 65,000 Aircrew/Parachutists and used by 2,800 1C0X2 Career Field members with 2.2M transactions per week. The ARMS is a web-based on-line management information system designed to support the base level Director of Operations (DO), aircrew supervisors, and managers. ARMS provides management policies and ensures the status of the Air Force flying programs are available to flying/jump supervisors to make resource allocation decisions. ARMS ensures accurate tracking of flying and ground training programs for each weapon system at each base. ARMS provides accurate and timely aircrew/parachutist information which assists in monitoring, tracking, and scheduling military training required to meet Air Force mission requirements. Additionally, the ARMS manages flying hours for aircrew parachutists world-wide to include USAF, Air Force Reserve Command (AFRC) and the Air National Guard (ANG).

The current ARMS functionality resides at a Defense Information System Agency (DISA) DECC and consists of "5" logical modules to include: Flight, Individual Training, Jumper Aircrew, Resource Tracking, Reports, and System. The sustainment of these capabilities and the introduction of new capabilities follows an agile development process, but the effectiveness of that process is severely limited by the existing production environment. A portion of the ARMS Jumper Aircrew module capabilities are being migrated to a mandated government-approved cloud environment. The cloud environment provides the Continuous Integration and Continuous Deployment (CI/CD) pipeline required to constantly deliver software in an agile framework, following the required DevSecOps methodology. The migration to the cloud environment and the DevSecOps methodology will transform ARMS into a scalable and flexible system capable of meeting all information requirements of the Aviation Resource Management community.

Once the initial cloud ARMS Jumper Aircrew capability is established, all remaining legacy program capabilities and new program requirements will be incorporated into the ARMS product backlog and prioritized for migration/stand-up in the cloud program instance. The ARMS DISA legacy program will sunset, once all capabilities are successfully migrated to the cloud environment.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver Other Flight Training system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605831F. In FY 2020 \$0.000 million was expended for civilian pay expenses in this program element, and in FY 2021 \$0.000 million is forecasted for civilian pay expenses in this program element.

This requirement supports performance of a full financial audit as required by title 10 U.S.C. Chapter 9A, Sec 240-D.

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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 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	2.057	1.332	2.134	0.000	2.134
Current President's Budget	2.054	1.330	1.999	0.000	1.999
Total Adjustments	-0.003	-0.002	-0.135	0.000	-0.135
• 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	-0.003	-0.002	-0.135	0.000	-0.135

Change Summary Explanation

FY 2022 funding was reduced by \$0.135 million to account for the availability of prior year execution balances.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
Title: Aviation Resource Management System (ARMS)	2.054	1.330	1.999
Description: Hardware/software development to update ARMS, adding functionality and system interfaces.			
FY 2021 Plans: Continue migrating legacy ARMS capabilities from DISA platform to Cloud One platform to include patches to correct system deficiencies and required upgrades; update system design, configuration, test, and training; and, continue RMF controls needed for continuous ATO.			
FY 2022 Plans: Continue migrating legacy ARMS capabilities from DISA platform to Cloud One platform; deliver patches as needed to correct system deficiencies or apply required upgrades; and, continue updates to system design, configuration, test, and training.			
FY 2021 to FY 2022 Increase/Decrease Statement: Funding increased due to amplified transferring of capabilities from legacy DISA system to the cloud-hosted system and provided additional contractor support for Engineering, Professional, and Administrative Support Services.			
Accomplishments/Planned Programs Subtotals	2.054	1.330	1.999

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D. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
E. Acquisition Strategy <p>The ARMS utilizes Agile development methodologies to incrementally develop and field enhancements to the existing system. The ARMS PMO utilizes military programmers for code development/sustainment and government civilians providing program management, engineering, and information technology support. The ARMS PMO has partnered with the USAF Business Enterprise Systems (BES) Directorate's Business Enterprise Systems Programming INnovation (BESPIN) office to acquire contractor resources that are experts at agile software development in a cloud environment. BESPIN has acquired current contractor support via Section 8a direct award using the United States Digital Services guide and templates on agile development which allowed for an agile acquisition.</p> <p>The initial ARMS cloud capability will be fielded in late FY21 and the updated ARMS Training Management module will be fielded to legacy ARMS in FY22. Once the Jump module capability is established in Cloud One, migration efforts will begin to transition all legacy ARMS capabilities to the Cloud One environment. Changes to the legacy baseline will be limited to patches, vulnerability mitigation, and required capability implementations during the migration. Legacy ARMS will be linked to the Cloud One instance throughout the migration effort. This will ensure users a seamless single sign-on application with underlying capabilities existing in both legacy DISA and Cloud One.</p> <p>The rate of migration capability is limited by the funding profile. With additional funding, the ARMS PMO could employ multiple agile teams with subject matter experts to work either on the same module faster or in parallel on separate modules. The ARMS PMO will have to maintain the legacy system during the entire transition to the cloud systems. A cost savings will be realized in the out years once the legacy system is decommissioned.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0804743F / Other Flight Training	Project (Number/Name) 675304 / Aviation Resource Management System (ARMS)
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
ARMS BESPIN FEARLESS	SS/FFP	Fearless Solution LLC : Baltimore, MD	-	0.810	Mar 2020	0.050	Mar 2021	-		-		-	-	-	10.000
Subtotal			-	0.810		0.050		-		-		-	-	-	N/A

Remarks
ARMS INCREMENT I INCLUDES BUILDS I AND II. ARMS BUILD I AND II ARE NOW LISTED SEPARATELY.

Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
ARMS Architecture Contract Support	C/FFP	Copper River Information Technology, LLC : Anchorage, AK	-	0.067	Sep 2020	0.067	Sep 2021	-		-		-	-	-	-
ARMS C&A SUPPORT III	C/FFP	OASIS : Lexington, MA	-	0.159	Apr 2020	0.159	Apr 2021	0.200	Apr 2022	-		0.200	-	-	-
ARMS CONFIGURATION MANAGER	C/FFP	OASIS : Lexington, MA	-	0.130	Apr 2020	0.130	Apr 2021	0.180	Apr 2022	-		0.180	-	-	-
ARMS SYSTEM ADMIN III	C/FFP	OASIS : Lexington, MA	-	0.161	Apr 2020	0.161	Apr 2021	0.215	Apr 2022	-		0.215	-	-	-
ARMS CIE SUPPORT	C/FFP	TBD : TBD	-	0.227	Apr 2020	0.227	Apr 2021	0.230	Apr 2022	-		0.230	-	-	-
ARMS INTEGRATION SUPPORT	C/FFP	Not specified. : TBD	-	0.163	Apr 2020	0.163	Apr 2021	0.185	Apr 2022	-		0.185	-	-	-
ARMS Program Assessment	SS/FFP	TM Capture : Maxwell AFB-Gunter Annex, AL	-	0.065	Feb 2020	0.065	Feb 2021	-		-		-	-	-	0.325
Subtotal			-	0.972		0.972		1.010		-		1.010	-	-	N/A

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Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
3600 / 7				PE 0804743F / Other Flight Training				675304 / Aviation Resource Management System (ARMS)								
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
ARMS Test Support	C/FFP	GSA : Maxwell AFB-Gunter Annex, AL	-	0.056	Apr 2020	0.056	Apr 2021	0.074	Apr 2022	-		0.074	-	-	0.260	
ARMS TEST MANAGER	C/CPAF	OASIS : Lexington, MA	-	0.159	Apr 2020	0.059	Apr 2021	0.170	Apr 2022	-		0.170	-	-	-	
Subtotal			-	0.215		0.115		0.244		-		0.244	-	-	N/A	
Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
ARMS PMA Other Govt Costs	C/TBD	TBD : TBD	-	0.057	Apr 2020	0.193	Apr 2021	0.745	Jan 2022	-		0.745	-	-	-	
Subtotal			-	0.057		0.193		0.745		-		0.745	-	-	N/A	
Project Cost Totals			-	2.054		1.330		1.999		-		1.999	-	-	N/A	
Remarks																

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0804743F / <i>Other Flight Training</i>	Project (Number/Name) 675304 / <i>Aviation Resource Management System (ARMS)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
ARMS EXHIBIT R-4				
Advisory and Assistance Services Contract	1	2021	4	2026
ARMS Program Assessment	1	2021	4	2026
Increment I Build 1 Contract	1	2021	4	2021
Development - Increment I Build 2 Complete	1	2021	4	2021
Architecture Support	1	2021	3	2021
ARMS Cloud Development/Migration	1	2021	4	2025
Cloud Development - Jump module	1	2021	4	2021
Field - Jump Module	1	2021	4	2021
Cloud Development Resources module	1	2021	4	2022
Field Resources module multiple releases	2	2021	4	2022
Cloud Development Flight module	1	2023	4	2024
Field Flight module multiple releases	2	2023	4	2024
Cloud development Training module	1	2024	4	2026
Field Training module multiple releases	2	2024	4	2025