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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force **Date:** February 2016

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 0305202F / <i>Dragon U-2</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	5.511	34.471	37.217	0.000	37.217	6.942	1.487	0.000	0.000	0.000	85.628
674820: <i>Sensor Development</i>	-	5.511	34.471	37.217	0.000	37.217	6.942	1.487	0.000	0.000	0.000	85.628
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Central Intelligence Agency (CIA) established the Senior Year Program in 1955. The program has evolved significantly over the years to include the U-2 airframe, engines, sensors, cameras, recorders, data links, life support systems, test facilities and equipment. The U-2S model airframes were constructed in the late 1980s, with the last aircraft rolling off the assembly line in 1989. The U-2S provides global reconnaissance signals intelligence (SIGINT) and geospatial intelligence (GEOINT) 24 hours a day, seven days a week in support of national and DoD worldwide missions. The U-2 is currently deployed to forward operating locations (FOL) around the world. Modifications to the aircraft and payloads are required to ensure continued operational effectiveness in support of Combatant Commander Requirements and in accordance with previous NDAA guidance.

In the 2013 PB, the Air Force decided to retain the U-2 weapon system instead of retiring it. At that time sustainment efforts and capability upgrades to the platform and payloads were pursued to support National and Combatant Commander requirements.

In the 2015 PB, the Air Force decided to retire the U-2 in 2016. In accordance with 10 U.S.C. 2244a, the U-2 weapon system is identified as Equipment Scheduled For Retirement Or Disposal: Limitation On Expenditures For Modifications, stating that modification to any aircraft (i.e., a given tail number, weapon, or item of equipment that the SECAF plans to retire or otherwise dispose of within 5 years after the date on which the modification would be completed) are prohibited.

In the 2016 PB, the Air Force re-phases U-2 divestiture to begin in FY2019 and to complete no later than FY2020. In accordance with 10 U.S.C. 2244a, the Secretary of the Air Force may waive the prohibition on modifications if the Secretary determines that carrying out the modification is in the national security interest of the United States. Therefore, modifications required to address sustainment issues (diminishing manufacturing sources, vanishing vendor items) or operational utility may be submitted to the Secretary for approval to ensure operational effectiveness and to comply with guidance received in previous and current NDAA's for the timeframe of phased divestiture. The National Security Waiver was signed by the Secretary of the Air Force on 26 May 2015.

In FY17, the Air Force will continue to address reliability, maintainability, sustainability, and safety issues and support U-2 integration of payloads and capabilities by taking prudent acquisition actions to meet operational requirements, comply with previous NDAA guidance, and IAW 10 U.S.C. Prudent acquisition activities also include trade studies, analyses, preliminary systems engineering, system and subsystem level testing in accordance with DoD and military standards, and specification development in support of both current program planning and execution as well as studies supporting analysis and investment in future U-2 program planning.

The U-2 Program provides funding for an Advanced Synthetic Aperture Radar System (ASARS) technology maturation effort. This effort will design, fabricate, integrate, and demonstrate system capability enhancements for a high altitude deep look SAR system.

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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 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	5.511	34.471	17.414	0.000	17.414
Current President's Budget	5.511	34.471	37.217	0.000	37.217
Total Adjustments	0.000	0.000	19.803	0.000	19.803
• 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	19.803	0.000	19.803

Change Summary Explanation

FY16 increase due to AF decision to rephrase U-2 divestiture to FY19

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
Title: U-2 Aircraft Update Block 20.1	5.011	0.000	9.902
Description: Aircraft enhancement development includes activities such as, but not limited to, trade studies, analysis, preliminary system engineering, system and subsystem testing or demonstrations, sensor specification development, Avionics Processor (AVP) upgrades, mission planning Joint Mission Planning System (JMPS) migration, Inertial Navigation System (INS) / Global Positioning System (GPS) stellar tracker initiatives, GPS upgrade, and tactical data link (L-16, IBS, IFDL, MADL, etc.) design and integration.			
FY 2015 Accomplishments: FY15 Supported aircraft sustainment activities such as, but not limited to, sensor sustainment and/or enhancements, avionics, mission planning, and airframe sustainment.			
FY 2016 Plans: No efforts are planned.			
FY 2017 Plans:			

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
FY17 will support aircraft sustainment activities such as, but not limited to, sensor sustainment and/or enhancements, avionics, navigation systems, mission planning, and airframe sustainment.			
Title: U-2 Payload Update Block 20.1	0.500	34.471	27.315
Description: Aircraft payload development supports sustainment and/or enhancement development includes activities such as, but not limited to, trade studies, analysis, preliminary system engineering, system and subsystem testing or demonstrations, sensor specification development, technology maturation effort to design, fabricate, integrate and demonstrate enhanced capabilities on the Advanced Synthetic Aperture Radar System (ASARS) development, integration and test, defensive systems, strategic and tactical data link (L-16, IBS, IFDL, MADL, etc.) design and integration.			
FY 2015 Accomplishments: FY15 supported payload sustainment and/or enhancement activities such as, but not limited to, Advanced Synthetic Aperture Radar System (ASARS) design and development, Avionics Processor (AVP), mission planning Joint Mission Planning System (JMPS) migration.			
FY 2016 Plans: FY16 will support payload sustainment and/or enhancement activities such as, but not limited to, Advanced Synthetic Aperture Radar System (ASARS) development, integration and test, defensive systems, and datalinks.			
FY 2017 Plans: FY17 will support payload sustainment and/or enhancement activities such as, but not limited to, Advanced Synthetic Aperture Radar System (ASARS) development, sensor integration and test, defensive systems, datalinks, and associated ground support equipment.			
Accomplishments/Planned Programs Subtotals	5.511	34.471	37.217

D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2017</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u>	<u>Total Cost</u>
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	
• APAF: BA05: Line Item # 11U200: <i>U-2 Mods</i>	0.000	22.095	36.074	0.000	36.074	26.590	7.474	0.000	0.000	Continuing	Continuing
• OPAF: BA02: Line Item # 821800: <i>Passenger Carrying Vehicles</i>	0.064	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.313
• RDT&E: BA07: 0305206F: <i>Airborne Reconnaissance Systems</i>	20.172	19.450	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-

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

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u> <u>Base</u>	<u>FY 2017</u> <u>OCO</u>	<u>FY 2017</u> <u>Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDT&E: BA04: 0604257F: <i>Advanced Technology & Sensors</i>	0.000	0.000	15.769	0.000	15.769	15.730	14.007	27.157	0.000	-	-

Remarks

A portion of funds in Airborne Reconnaissance Systems and Advanced Technology & Sensors will be used to support sensor refurbishment and development.

E. Acquisition Strategy

Modifications to existing platform, payloads, and associated ground control equipment via Engineering Change Proposals (ECPs)/Task Orders on existing USAF contracts.

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 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305202F / <i>Dragon U-2</i>	Project (Number/Name) 674820 / <i>Sensor Development</i>
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Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
ASARS Phase 1	SS/CPFF	Raytheon/Lockheed Martin : El Segundo, CA	-	0.000		0.000		0.000		0.000		0.000	Continuing	Continuing	-
ASARS Phase 1 Enhancements Design	SS/CPFF	Raytheon/Lockheed Martin : El Segundo, CA	-	4.140	Sep 2015	2.183	Jan 2016	0.000		0.000		0.000	0.000	6.323	TBD
ASARS Phase 2 Integration & Demonstration	SS/CPFF	Raytheon/Lockheed Martin Aeronautics : El Segundo, CA	-	0.000		31.160	Mar 2016	16.700	Mar 2016	0.000		16.700	Continuing	Continuing	TBD
Avionics AVP Upgrade/OMS Analysis	SS/FFP	KIHOMAC : Layton, UT	-	0.911	Aug 2015	0.000		0.000		0.000		0.000	0.000	0.911	TBD
Ground Support Equipment	SS/CPFF	L3 Communications : Salt Lake City, UT	-	0.000		0.000		9.901	Nov 2016	0.000		9.901	Continuing	Continuing	TBD
Navigation System	SS/CPFF	Lockheed Martin Aeronautics : Palmdale, CA	-	0.000		0.000		9.902	Dec 2016	0.000		9.902	Continuing	Continuing	TBD
Subtotal			-	5.051		33.343		36.503		0.000		36.503	-	-	-

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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 Office Support	C/FFP	Not specified. : TBD	-	0.460	Jun 2015	1.128		0.714		0.000		0.714	Continuing	Continuing	-
Subtotal			-	0.460		1.128		0.714		0.000		0.714	-	-	-

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
Subtotal			-	-		-		-		-		-	-	-	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Air Force **Date:** February 2016

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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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

Advanced Synthetic Aperture Radars System (ASARS)	
Ground Support Equipment	
Navigation System	

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force **Date:** February 2016

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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Advanced Synthetic Aperture Radars System (ASARS)	1	2015	2	2019
Ground Support Equipment	1	2017	2	2018
Navigation System	1	2017	4	2019