Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force	Date: March 2023
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305208F / *Distributed Common Ground/Surface Systems*

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	-	24.558	26.901	88.854	0.000	88.854	43.312	61.782	93.767	94.867	Continuing	Continuing
674826: *Common Imagery Ground / Surface Systems*	-	24.558	26.901	88.854	0.000	88.854	43.312	61.782	93.767	94.867	Continuing	Continuing

A. Mission Description and Budget Item Justification

Air Force Distributed Common Ground System (AF DCGS) (AN/GSQ-272) is the Combat Air Force (CAF) weapon system for planning, direction, collection, processing, exploitation, production, dissemination, and problem centric, sensor-agnostic analysis of data. The AF DCGS weapon system provides capabilities required to connect, direct and exploit sensors and transform multi-source/multi-domain data into actionable intelligence to find, fix, and target adversary forces and enable simultaneous kill chains at the speed and scale of peer conflict. AF DCGS is also a major component of the DoD DCGS, the system is designed to complement and interoperate with the other Services' DCGS systems (Army, Navy and Marine Corps), and a key provider/consumer of the sensing grid and Joint All Domain Command and Control (C2) (JADC2) & Advanced Battle Management System (ABMS) efforts. The AF DCGS mission is to provide Joint Task Force (JTF) Commanders, Joint and Combined Air Component Commanders (JFACC/CFACC), Unified Commands, and other directed organizations with global, time-sensitive Intelligence, Surveillance and Reconnaissance (ISR) data and fused multi-Intelligence (Multi-INT) products across the spectrum of military operations.

AF DCGS is a Multi-INT, federated weapon system capable of exploiting intelligence data from manned platforms, Remotely Piloted Aircraft (RPA), non-traditional ISR platforms, national and commercial satellites and other collection systems. AF DCGS serves as the main Sense-Making organization within the Air Force ISR Sensing Grid and has access to a multitude of sensors and data across the Intelligence Community, to include Publicly Available Information (PAI). AF DCGS Analysts leverage Artificial Intelligence (AI)/Machine Learning (ML), Automation and Augmentation (AAA) technologies to focus their review/analysis of multi-source/multi-domain intelligence across the tactical/national sensor grid and within federated databases to enable target and problem centric, sensor-agnostic analysis and exploitation to address Joint operational requirements by providing a common means to provide intelligence to field commanders and in support of the Air Operations Center (AOC) mission requirements, and supports sensor to shooter and the kill chain across the full range of military operations. The DCGS analysts use all available data sources and emerging capabilities, including AAA, to enhance their understanding of intelligence/targeting problem sets and provide the required intelligence.

Currently, AF DCGS is composed of eight core sites (two active duty worldwide, three active duty regional and three Air National Guard regional), six SIGINT Distributed Mission Sites (four collocated with National Mission Partner sites), three Air National Guard full-motion video sites, three support sites, and four integration and test sites connected by robust, resilient communications infrastructure, to support Near-Peer competition/contested environments. AF DCGS currently supports ongoing operations from forward deployed and in-garrison CONUS and OCONUS-based locations. AF DCGS provides integrated ISR by providing quality, fused Geospatial Intelligence (GEOINT), Signals Intelligence (SIGINT), and Measurement and Signature Intelligence (MASINT) tailored to the warfighter for all levels of conflict.

In alignment with DoD and AF direction, AF DCGS migrated to an open architecture to rapidly incorporate new technologies and tools, new and/or improved sensor capabilities, and mission applications to meet emerging and urgent operational needs. AF DCGS is a critical enabler for the sensing grid/ABMS/JADC2. AF DCGS is also aligned with USD(I&S)'s efforts to improve data sharing through its Common Data Fabric. AF DCGS integrates services and applications from both commercial-off-the-shelf and government-off-the-shelf sources to the maximum extent possible to fulfill operational requirements and data sharing requirements across the DoD DCGS

community. AF DCGS' robust network transport/open, mission assured hybrid-cloud (mix of private on premises and public commercial cloud) architecture enables integration of new/updated enterprise services, near-real time and problem-centric/sensor agnostic analysis and exploitation capabilities on a recurring cadence.

Starting in FY 2024, in order to comply with updated financial guidance for agile software development, funding was realigned from Other Procurement, Air Force (OPAF) funds to Research, Development, Test and Evaluation (RDT&E) funds to better account for the program's software intensive focus. Due to this accounting change, efforts previously utilizing OPAF funds will now be funded by RDT&E, to include High Altitude (HA) and Full Motion Video (FMV) Agile Release Trains (ARTs) efforts to rapidly develop, integrate and test new GEOINT-specific operational and management capabilities; SIGINT Modernization ART to rapidly develop and integrate new SIGINT-specific operational and management capabilities; rapidly develop and integration new and updated Multi-INT and visualization and situational awareness capabilities, and AAA capabilities and develop and integrated updates to the DCGS network transport, commercial cloud infrastructure, and enterprise and core shared services.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, and 0606398F. In FY22, $0.220M was expended for civilian pay expenses in this program element, and in FY23, $0.501M 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.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	24.568	26.901	27.452	0.000	27.452
Current President's Budget	24.558	26.901	88.854	0.000	88.854
Total Adjustments	-0.010	0.000	61.402	0.000	61.402
• 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	-0.010	0.000	61.402	0.000	61.402

Change Summary Explanation

Starting in FY 2024, in order to comply with updated financial guidance for agile software development, funding was realigned from Other Procurement, Air Force (OPAF) funds to Research, Development, Test and Evaluation (RDT&E) funds to better account for the program's software intensive focus. In FY 2024, the increase is the $61.402 million reflected in the Total Adjustment line.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force			Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305208F / *Distributed Common Ground/Surface Systems*	Project (Number/Name) 674826 / *Common Imagery Ground / Surface Systems*	

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
674826: *Common Imagery Ground / Surface Systems*	-	24.558	26.901	88.854	0.000	88.854	43.312	61.782	93.767	94.867	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Program management consists of four ACAT III efforts: GEOINT Transformation, SIGINT Transformation, Multi-Intelligence, and Network Infrastructure Transformation.
1, GEOINT Transformation-1: Rapidly integrates new and updated GEOINT capabilities, enables quick/seamless integration of new sensors, data types, sensor planning, and command and control (C2) capabilities into the open architecture framework. Leverages mission partner methods and tools to the maximum extent possible.

2. SIGINT Transformation-1: Rapidly integrates new and updated SIGINT capabilities, enables quick/seamless integration of new sensors, data types, sensor planning, command and control (C2) capabilities into the open architecture framework. Leverages mission partner methods and tools to the maximum extent possible.

3. Multi-Intelligence-1: Rapidly integrates new and updated enterprise applications to include voice and chat communications, collaboration and situational awareness, Multi-INT fusion, and data analytics capabilities (to include Artificial Intelligence/Machine Learning AI/ML, Automation and Augmentation (AAA)). Also includes the Intelligent Modeling and Predictive Analysis of Cyberspace Targeting (IMPACT) program, which develops concepts, Tactics/Techniques/Procedures (TTPs) and technologies for synchronizing ISR and non-kinetic capabilities. Rapidly integrates new and updated data exchange and interoperability capabilities in support of USD(I&S)'s Common Data Fabric (CDF) Initiative. Addresses program office test and evaluation activities.

4. Network Infrastructure Transformation-1: Continues to update the AF DCGS network transport and open architecture infrastructure to a cyber-resilient, open, scalable, commercial-based, architecture, improving data ingest, transfer, and storage capabilities, collaboration, and content driven discovery. AF DCGS Platform as a Service (PaaS) consists of a mix of private on-premises and public commercial cloud architecture. AF DCGS leverages Unclassified, Secret and Top Secret Air Force commercial cloud environments. Network infrastructure transformation also handles integration of ground line of sight capabilities supporting ISR airborne platform assets.

Starting in FY 2024, in order to comply with updated financial guidance for agile software development, funding was realigned from Other Procurement, Air Force (OPAF) funds to Research, Development, Test and Evaluation (RDT&E) funds to better account for the program's software intensive focus. This is to comply with DoD FMR 700014 and DAFMAN 65-601V1 guidance for agile software development.

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, and 0606398F. In FY22, $0.220M was expended for civilian pay expenses in this program element, and in FY23, $0.501M is forecasted for civilian pay expenses in this program element.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305208F / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 674826 / *Common Imagery Ground / Surface Systems*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: GEOINT Transformation-1 ***Description:*** GEOINT Transformation-1: Rapidly integrates new and updated GEOINT capabilities, enables quick/seamless integration of new sensors, data types, sensor planning, and command and control (C2) capabilities into the open architecture framework. Leverages mission partner methods and tools to the maximum extent possible. ***FY 2023 Plans:*** - Continue High Altitude (HA) and Full Motion Video (FMV) Agile Release Trains to rapidly develop, integrate and test new GEOINT-specific capabilities on DCGS hybrid cloud environment. ***FY 2024 Plans:*** - Will continue to develop, integrate, test and field new and updated GEOINT sensor/sensor mode command and control (C2), mission planning (Enterprise Collection Planner), sensor management and operational capabilities - Will continue to develop, integrate, test and field new and updated GEOINT-specific High Altitude (HA) and Full Motion Video (FMV) operational (workflow, exploitation, etc.) and management capabilities on DCGS private on-premises and/or public commercial cloud architecture (pilot efforts for commercial cloud) ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase due to realignment of OPAF to RDT&E funds in order to comply with updated financial guidance for agile software development.	2.432	6.688	31.200
Title: SIGINT Transformation-1 ***Description:*** Rapidly integrates new and updated SIGINT capabilities, enables quick/seamless integration of new sensors, data types, sensor planning, command and control (C2) capabilities into the open architecture framework. Leverages mission partner methods and tools to the maximum extent possible. ***FY 2023 Plans:*** - Continue SIGINT Modernization Agile Release Train to rapidly develop and integrate new SIGINT-specific capabilities into DCGS hybrid cloud environment. ***FY 2024 Plans:*** - Will continue to develop, integrate, test and field new and updated SIGINT sensor command and control (C2), mission planning, and sensor management operational capabilities	7.263	7.000	39.209

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305208F / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 674826 / *Common Imagery Ground / Surface Systems*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
- Will continue to develop, integrate, test, and field new and updated SIGINT-specific operational (workflow and exploitation) and management capabilities on DCGS private on-premises and intelligence community cloud architecture, as well as integrate new data types into SIGINT Sensor Data Ingest (SSDI) ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase due to realignment of OPAF to RDT&E funds in order to comply with updated financial guidance for agile software development.			
Title: Multi-Intelligence-1 ***Description:*** Rapidly integrates new and updated enterprise applications, to include voice and chat communications, collaboration and situational awareness, multi-INT fusion, and data analytics capabilities (to include Artificial Intelligence/ Machine Learning AI/ML, Automation and Augmentation (AAA)). Also includes the Intelligent Modeling and Predictive Analysis of Cyberspace Targeting (IMPACT) program, which develops concepts, Tactics/Techniques/Procedures (TTPs) and technologies for synchronizing ISR and non-kinetic capabilities. Rapidly integrates new and updated data exchange and interoperability capabilities in support of USD(I&S)'s Common Data Fabric (CDF) Initiative. Addresses program office test and evaluation activities. ***FY 2023 Plans:*** - Continue to rapidly develop and integrate new Multi-INT and data analytics capabilities into DCGS hybrid cloud environment - Continue agile development and field IMPACT program capabilities - Continue to rapidly develop and field ECC (Voice Portion) ***FY 2024 Plans:*** - Will continue to rapidly develop, integrate, test and field new and updated Multi-INT, Artificial Intelligence/Machine Learning, Automation and Augmentation (AAA) and visualization/situational awareness capabilities on DCGS private on-premises and/or public commercial cloud architecture - Will continue to rapidly develop, integrate, test and field IMPACT program capabilities - Will continue to fund test support to complete developmental test events for operational capabilities required by AF Directives ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Decrease due to Test support and PMA decreases	13.108	12.213	11.616
Title: Network Infrastructure Transformation-1 ***Description:*** Increase due to realignment of OPAF to RDT&E funds in order to comply with updated financial ***FY 2023 Plans:***	1.755	1.000	6.829

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305208F / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 674826 / *Common Imagery Ground / Surface Systems*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
• Continue to develop and integrate open architecture, mission-assured hybrid-cloud infrastructure and enterprise services. ***FY 2024 Plans:*** - Will continue to develop, integrate and test updates to the DCGS network transport, OA Platform as a Service (PaaS) on-premises and commercial cloud infrastructure, enterprise and core shared services, and line of site capability - Will continue to integrate recurring cyber security patches and develop solutions to meet AF-mandated cyber security mandates ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase due to realignment of OPAF to RDT&E funds in order to comply with updated financial guidance for agile software development.			
Accomplishments/Planned Programs Subtotals	24.558	26.901	88.854

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• OPAF 04 Line Item, 846080: *DCGS-AF*	136.296	136.989	56.329	-	56.329	19.146	41.653	80.499	83.503	Continuing	Continuing

Remarks

D. Acquisition Strategy

AF DCGS acquisition strategy is to use approved lean and agile industry practices and leverage to the maximum extent possible commercial off the shelf, government off the shelf, and mission partner capabilities to continuously develop and field new and improved operational capabilities hosted on its open, hybrid cloud environment to meet mission requirements. Contracting strategy involves a combination of Basic Ordering Agreements (BOAs), Indefinite Delivery/Indefinite Quantity (IDIQ) contracts awarded to execute program funds and delivery/task orders are negotiated/awarded individually.

The program is managed as four ACAT III efforts: GEOINT Transformation, SIGINT Transformation, Multi-Intelligence, and Network Infrastructure Transformation.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force			Date: March 2023
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305208F / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 674826 / *Common Imagery Ground / Surface Systems*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GEOINT Transformation-1	Various	Various : Various	-	2.432	Jan 2022	6.135	Dec 2022	26.700	Jan 2024	-		26.700	Continuing	Continuing	-
SIGINT Transformation-1	Various	Various : Various	-	4.801	Apr 2022	6.000	Mar 2023	33.552	Jan 2024	-		33.552	Continuing	Continuing	-
Multi-Intelligence-1	Various	Various : Various	-	6.923	Feb 2022	7.338	Jan 2023	7.530	Jan 2024	-		7.530	Continuing	Continuing	-
Network Infrastructure Transformation-1	Various	Various : Various	-	1.191	Dec 2021	1.000	Jun 2023	5.800	Jan 2024	-		5.800	Continuing	Continuing	-
		Subtotal	-	15.347		20.473		73.582		-		73.582	Continuing	Continuing	N/A

Remarks

Note on "various" entries - Contract Method, Contract Type, Performing Activity, Target Value of Contract are entered as "various" because there are multiple projects within each upgrade and depending on the type of effort to be completed determines the contract vehicle to use. There is no way on this document to delineate the contracts that support each upgrade as they are numerous.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Multi-Intelligence-1	Various	Various : Various	-	2.759	Jan 2022	2.854	Jan 2023	2.415	Jan 2024	-		2.415	Continuing	Continuing	-
DCA Positions	Various	Various : Various	-	0.220	May 2022	0.501	Mar 2023	0.000	Mar 2024	-		0.000	Continuing	Continuing	-
		Subtotal	-	2.979		3.355		2.415		-		2.415	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various : Various	-	6.232	Nov 2021	3.073	Nov 2022	12.857	Nov 2023	-		12.857	Continuing	Continuing	-
		Subtotal	-	6.232		3.073		12.857		-		12.857	Continuing	Continuing	N/A

Remarks

Note on "various" entries - Contract Method, Contract Type, Performing Activity, Target Value of Contract are entered as "various" because there are multiple projects within in each upgrade and depending on the type of effort to be completed determines the contract vehicle to use. There is no way on this document to delineate the contracts that support each upgrade as they are numerous.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force			Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305208F / *Distributed Common Ground/Surface Systems*	Project (Number/Name) 674826 / *Common Imagery Ground / Surface Systems*	

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	24.558		26.901		88.854		-		88.854	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305208F / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 674826 / *Common Imagery Ground / Surface Systems*

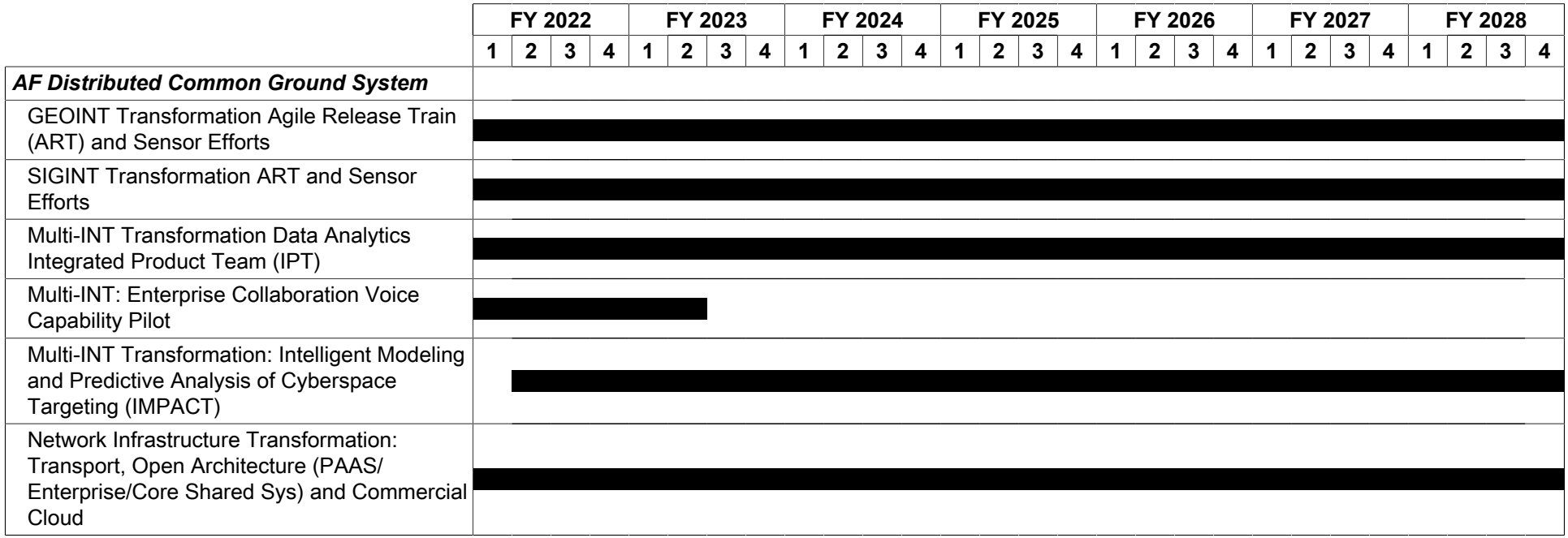

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305208F / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 674826 / *Common Imagery Ground / Surface Systems*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
AF Distributed Common Ground System				
GEOINT Transformation Agile Release Train (ART) and Sensor Efforts	1	2022	4	2028
SIGINT Transformation ART and Sensor Efforts	1	2022	4	2028
Multi-INT Transformation Data Analytics Integrated Product Team (IPT)	1	2022	4	2028
Multi-INT: Enterprise Collaboration Voice Capability Pilot	1	2022	2	2023
Multi-INT Transformation: Intelligent Modeling and Predictive Analysis of Cyberspace Targeting (IMPACT)	2	2022	4	2028
Network Infrastructure Transformation: Transport, Open Architecture (PAAS/ Enterprise/Core Shared Sys) and Commercial Cloud	1	2022	4	2028