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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force **Date:** April 2022

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	25.474	40.103	27.586	0.000	27.586	31.761	32.353	33.035	33.769	Continuing	Continuing
640211: <i>GLOBAL ACCESS</i>	-	5.633	9.484	7.071	0.000	7.071	8.247	8.400	8.579	8.769	Continuing	Continuing
640212: <i>C2/OPTIMIZATION/ MODELING AND SIMULATION</i>	-	14.412	24.958	15.587	0.000	15.587	17.646	17.975	18.352	18.760	Continuing	Continuing
640213: <i>CYBER</i>	-	5.429	5.461	4.928	0.000	4.928	5.868	5.978	6.104	6.240	Continuing	Continuing
640215: <i>Transportation Management Service</i>	-	0.000	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.200

Note

- This program, BA 4, PE 0604776F, project 640211, Aerial Delivery Platform, is a new start.
- This program, BA 4, PE 0604776F, project 640211, Modular Autonomous Ready Dynamic Positioning System, is a new start.
- This program, BA 4, PE 0604776F, project 640212, Analyzer Driven Data Integrity, is a new start.
- This program, BA 4, PE 0604776F, project 640212, Strategic Theater Orchestration and Resource Management, is a new start.
- This program, BA 4, PE 0604776F, project 640212, Risk Assessment and Vetting for the Enterprise, is a new start.
- This program, BA 4, PE 0604776F, project 640212, Component Level Operational Decision Advantage, is a new start.
- This program, BA 4, PE 0604776F, project 640212, JDDE Mission Assurance Coordinator, is a new start.

A. Mission Description and Budget Item Justification

This program provides for the development, integration, demonstration and detailed assessment of capabilities which improve deployment, distribution and supply chain decision-making/collaboration (e.g., planning stage to real-time execution/retrograde operations) without need for highly specialized operators. Projects in this area address the following: decision support tools, distribution process simulations/analytics, distribution demand forecasting/execution monitoring, automated decision-maker support (e.g., queuing, alerting, courses of action), automated status monitoring with information fusion to include drilldown capability, and resilient Command & Control (C2) infrastructure capabilities. Current planning, forecasting, and collaboration capabilities do not permit full synchronization of people, processes and assets to execute planned operations. Automated tools must be able to dynamically analyze/predict demand and provide input to advanced distribution planning systems to include the capability for Combatant Commanders to manage theater transportation operations from the port of debarkation to the point of need. Transportation information exchange across the DOD is inhibited by disparate systems, multiple data standards and insufficient interfaces. The ability to rapidly determine the impact of any delays/changes and conduct "what-if" impact assessments on the closure of force packages is required. This project addresses the required mission support to combatant commanders and other customers in the area of C2, Optimization, and Modeling and Simulations.

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,

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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force	Date: April 2022
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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>
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0606398F. In FY21 0M was expended for civilian pay expenses in this program element (PE). In FY22, Joint Transportation Management System (JTMS) 15.5M was placed in this PE, for civilian pay expenses, until a separate PE could be established. No other FY will include civilian pay expenses in this PE.

This effort is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	25.788	40.103	0.000	0.000	0.000
Current President's Budget	25.474	40.103	27.586	0.000	27.586
Total Adjustments	-0.314	0.000	27.586	0.000	27.586
• 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	-0.314	0.000			
• Other Adjustments	0.000	0.000	27.586	0.000	27.586

Change Summary Explanation

The FY 2022 President's Budget submittal did not reflect FY 2023 through FY 2026 funding. Therefore, an explanation of the change between the two budget positions for FY2023 cannot be made in a relevant manner.

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force										Date: April 2022		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>				Project (Number/Name) 640211 / <i>GLOBAL ACCESS</i>			
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
640211: <i>GLOBAL ACCESS</i>	-	5.633	9.484	7.071	0.000	7.071	8.247	8.400	8.579	8.769	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 4, PE 0604776F, project 640211, Aerial Delivery Platform, is a new start.
 This program, BA 4, PE 0604776F, project 640211, Modular Autonomous Ready Dynamic Positioning System, is a new start.

A. Mission Description and Budget Item Justification

This program provides for the development, integration, demonstration and detailed assessment of DOD procedures/technologies targeted at optimizing throughput at the nodes as well as across the conduits of the deployment and distribution supply chains, from origin to point of use as well as return. Needed capabilities include inventory/cargo management, materiel handling innovations, improved physical node access, port throughput improvements, innovative delivery methods (e.g., precision airlift, autonomous re-supply), and cargo/container security. This project addresses required mission support to combatant commanders and other customers of DOD's distribution and transportation systems in the area of deployment/distribution velocity management, manned/unmanned systems to the point of effect, and increased global reach in austere/anti-access environments.

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, 0606398F. In FY21 0M was expended for civilian pay expenses in this program element (PE). In FY22, Joint Transportation Management System (JTMS) 15.5M was placed in this PE, for civilian pay expenses, until a separate PE could be established. No other FY will include civilian pay expenses in this PE.

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

	FY 2021	FY 2022	FY 2023
Title: Petroleum Undersea Sustainment Hose	0.400	0.450	0.250
Description: Provide an agile, submersible over-the-shore conduit that can be pre-positioned or immediately employed from vessels of opportunity such as a commercial offshore supply vessel (OSV).			
FY 2022 Plans: Addresses Sea Basing Technologies/Logistics-Over-The-Shore need to enhance the Joint Force Commander's flexibility			
FY 2023 Plans: Addresses Sea Basing Technologies/Logistics-Over-The-Shore need to enhance the Joint Force Commander's flexibility			
FY 2022 to FY 2023 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022		
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640211 / <i>GLOBAL ACCESS</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
Development requirement decreases				
<p>Title: Collision Avoidance and Navigation Insight System/Aerial Port of the Future</p> <p>Description: Autonomous Technologies applied to the 60K Tunner to improve throughput and safety</p> <p>FY 2022 Plans: Funding will test semi autonomous technologies</p> <p>FY 2023 Plans: Funding will develop future airport automation</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Decrease in development requirement</p>		0.605	1.612	0.820
<p>Title: Submersible Matting</p> <p>Description: Develop a submersible matting system (SUBMAT) to facilitate mobility across the shoreline and wet/dry gaps by combining current soil stability technology and mobility matting into a single product.</p> <p>FY 2022 Plans: Design for manufacture analysis and preliminary fabrication</p> <p>FY 2023 Plans: Build for manufacture analysis and preliminary fabrication</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Decrease in development requirements</p>		0.300	0.700	0.500
<p>Title: Rapid Available Interface for trans-Loading</p> <p>Description: Provides a process to rapidly assess the condition, design acceptable repairs and delivers pre-kitted rail repair and retrofit solutions. The standardized repair kits allows for the development of Tactics, Techniques and Procedures (TTPs) for each repair that can be scaled to address a range of damages.</p> <p>FY 2022 Plans: Work will identify and develop a robotic survey vehicle integrated with rail condition survey equipment.</p> <p>FY 2023 Plans:</p>		0.150	2.000	0.500

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
Work will identify and develop a robotic survey vehicle integrated with rail condition survey equipment. FY 2022 to FY 2023 Increase/Decrease Statement: Decrease in development requirements				
Title: Repair and Retrofit of Railway Systems Description: The standardized repair kits allows for the development of Tactics, Techniques and Procedures (TTPs) for each repair that can be scaled to address a range of damages. FY 2022 Plans: Work will identify and develop a robotic survey vehicle integrated with rail condition survey equipment. FY 2023 Plans: Work will identify and develop a robotic survey vehicle integrated with rail condition survey equipment.		0.500	0.750	0.750
Title: Drone Supported Surface Deployment Description: Determine the suitability of using modern drones and drone mapping technology for capturing data for input to systems such as the Integrated Computerized Deployment System (ICODES) and the Transportation Geospatial Information System (TGIS) FY 2022 Plans: Will analyze RFID Hardware, Middleware and Software FY 2022 to FY 2023 Increase/Decrease Statement: N/A		0.348	0.250	-
Title: Buoyant Roll On/Roll Off Interface Kit Description: Prototype consisting of the RO/RO ramp to interface to a commercial supply vessel and a section of floating causeway and ancillary equipment sufficient to conduct a limited operational assessment FY 2022 Plans: Developing a prototype rapidly deployable ship-to-shore connector capability FY 2023 Plans: Continue to develop a prototype rapidly deployable ship-to-shore connector capability FY 2022 to FY 2023 Increase/Decrease Statement:		0.600	1.800	0.400

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
Decrease in development requirements				
Title: 35 Thousand Foot Airdrop Description: Develop capabilities to airdrop from 35 thousand feet to increase aircraft standoff range from threat. FY 2022 Plans: Working parafoil and parachute technologies FY 2023 Plans: Continuing to work parafoil and parachute technologies FY 2022 to FY 2023 Increase/Decrease Statement: NA		0.650	0.500	0.500
Title: Interoperable Multi-modal Patient Movement Description: Create system to move mass casualties when air medivac is not available FY 2022 Plans: Ends FY21 FY 2022 to FY 2023 Increase/Decrease Statement: Ends FY21		0.410	0.000	-
Title: Replenishment from Ships to Point of Need Delivery/AIRADE Description: Unmanned system launched from ships and capable of carrying supplies up to 100 miles inland. FY 2022 Plans: Developing technologies to support required payloads and distances FY 2023 Plans: Continue development of technologies to support required payloads and distances FY 2022 to FY 2023 Increase/Decrease Statement: Development Schedule requirement increase		0.750	0.350	0.625
Title: Use of Dual Row Airdrop System with Joint Light Tactical Vehicle Description: Increasing the strength of C-17 dual row rails to enable dropping the JLTV		0.198	0.602	0.820

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>FY 2022 Plans: Applying technologies and testing results</p> <p>FY 2023 Plans: Continuing to apply technologies and test results</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Development Schedule requirement increase</p>				
<p>Title: Enhanced Vision Navigation for Joint Precision Airdrop System</p> <p>Description: Advanced technologies to improve airdrop capabilities to the warfighter.</p> <p>FY 2022 Plans: Working technologies to improve airdrop capabilities</p> <p>FY 2023 Plans: Continuing to work technologies to improve airdrop capabilities</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Development schedule requirement increases</p>		0.372	0.320	0.520
<p>Title: Expeditionary End-to-End Fueling Concept</p> <p>Description: Addressing gap in theater fuel delivery/distribution capabilities to inform the development of the Army Early Entry Fluid Distribution System as well as provide a development path for Navy/USMC ship-to-shore capabilities.</p> <p>FY 2022 Plans: N/A</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: N/A</p>		0.150	0.000	-
<p>Title: Autonomous Drone Delivery from Airdrop Systems</p> <p>Description: An air-droppable Unmanned Aircraft System (UAS) to conduct resupply missions in densely populated urban areas.</p> <p>FY 2022 Plans: N/A</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement:</p>		0.100	0.000	-

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
N/A				
Title: Aerial Delivery Platform Description: Platform for air dropping mutiple vehicles FY 2023 Plans: Will design platform FY 2022 to FY 2023 Increase/Decrease Statement: FY23 new start		-	-	0.499
Title: Modular Autonomous Ready Dynamic Positioning System Description: Position for sealift lighterage assets FY 2022 Plans: N/A FY 2023 Plans: Will develop a positioning system for sealift lighterage assets FY 2022 to FY 2023 Increase/Decrease Statement: FY23 New Start		-	0.000	0.387
Title: Resilient Expeditionary Agile Littoral Logistics Description: Transfer of fuel ashore from various conveyances from off-shore platform FY 2022 Plans: Funding technology development of fuel transfer FY 2023 Plans: Continue technology development of fuel transfer FY 2022 to FY 2023 Increase/Decrease Statement: Development requirement schedule increase		0.100	0.150	0.500
Accomplishments/Planned Programs Subtotals		5.633	9.484	7.071
C. Other Program Funding Summary (\$ in Millions)				
N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640211 / <i>GLOBAL ACCESS</i>

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

Remarks

D. Acquisition Strategy

Requirements for joint deployment and distribution enterprise technology enhancements are annually identified, validated and prioritized by the Joint Deployment & Distribution Enterprise (JDDE) community. Pursuit of the development of new capabilities to meet these requirements is managed by the United States Transportation Command (USTRANSCOM). Prototype products, once evaluated by the users, are spirally transitioned by the operational community.

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640211 / <i>GLOBAL ACCESS</i>

	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	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

<i>Deployment and Distribution</i>																												
Integrated Logistics Support																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640211 / <i>GLOBAL ACCESS</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Deployment and Distribution</i>				
Integrated Logistics Support	1	2021	4	2027

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force										Date: April 2022		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>				Project (Number/Name) 640212 / <i>C2/OPTIMIZATION/MODELING AND SIMULATION</i>			
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
640212: <i>C2/OPTIMIZATION/MODELING AND SIMULATION</i>	-	14.412	24.958	15.587	0.000	15.587	17.646	17.975	18.352	18.760	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 4, PE 0604776F, project 640212, Analyzer Driven Data Integrity, is a new start.
 This program, BA 4, PE 0604776F, project 640212, Strategic Theater Orchestration and Resource Management, is a new start.
 This program, BA 4, PE 0604776F, project 640212, Risk Assessment and Vetting for the Enterprise, is a new start.
 This program, BA 4, PE 0604776F, project 640212, Component Level Operational Decision Advantage, is a new start.
 This program, BA 4, PE 0604776F, project 640212, JDDE Mission Assurance Coordinator, is a new start.

A. Mission Description and Budget Item Justification

This program provides for the development, integration, demonstration and detailed assessment of capabilities which improve deployment, distribution and supply chain decision-making/collaboration (e.g., planning stage to real-time execution/retrograde operations) without need for highly specialized operators. Projects in this area address the following: decision support tools, distribution process simulations/analytics, distribution demand forecasting/execution monitoring, automated decision-maker support (e.g., queuing, alerting, courses of action), automated status monitoring with information fusion to include drilldown capability, and resilient Command & Control (C2) infrastructure capabilities. Current planning, forecasting, and collaboration capabilities do not permit full synchronization of people, processes and assets to execute planned operations. Automated tools must be able to dynamically analyze/predict demand and provide input to advanced distribution planning systems to include the capability for Combatant Commanders to manage theater transportation operations from the port of debarkation to the point of need. Transportation information exchange across the DOD is inhibited by disparate systems, multiple data standards and insufficient interfaces. The ability to rapidly determine the impact of any delays/changes and conduct "what-if" impact assessments on the closure of force packages is required. This project addresses the required mission support to combatant commanders and other customers in the area of C2, Optimization, and Modeling and Simulations. The Joint Transportation Management System (JTMS) will develop and configure a commercial-off-the-shelf (COTS) transportation/financial management product to deliver DoD enterprise-wide end-to-end transportation and transportation-related financial business process reform.

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, 0606398F. In FY21 0M was expended for civilian pay expenses in this program element (PE). In FY22, Joint Transportation Management System (JTMS) 15.5M was placed in this PE, for civilian pay expenses, until a separate PE could be established. No other FY will include civilian pay expenses in this PE.

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

	FY 2021	FY 2022	FY 2023
Title: TRANSCOM Innovation	3.498	16.924	4.006

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>Description: Rapidly develop and integrate technology solutions for the enterprise</p> <p>FY 2022 Plans: Continue to pursue and develop solutions to identified challenges</p> <p>FY 2023 Plans: Continue to pursue and develop solutions to identified challenges</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Development schedule decrease</p>				
<p>Title: Space X Support</p> <p>Description: Support the development of space logistics</p> <p>FY 2022 Plans: ended in FY21</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: N/A</p>		0.179	0.000	-
<p>Title: Ares Dynamic Network Automation</p> <p>Description: Support plans that are released on unclassified, untrusted commercial networks in order to solicit and contract with vendors capable of supplying theater forces.</p> <p>FY 2022 Plans: Funding will allow permissioned transactional blockchain network integrated with an identity blockchain that controls access</p> <p>FY 2023 Plans: Funding will allow permissioned transactional blockchain network integrated with an identity blockchain that controls access</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Development varies by FY. Requirement increased in FY23</p>		-	0.446	0.891
<p>Title: Resilient Logistics JCTD</p> <p>Description: Deliver logistical deception kits to confuse and deny enemy Intelligence, Surveillance, Reconnaissance (ISR)</p> <p>FY 2022 Plans:</p>		0.000	0.200	-

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
Funding will allow development of deception kits FY 2022 to FY 2023 Increase/Decrease Statement: Effort ends FY22				
Title: Air Refueling Optimization Description: System managing the various phases of the Air Refueling (AR) fleet management, validation, allocation and execution process. FY 2022 Plans: Funding will continue development of opportunities that the current A/R planning systems lack: optimization algorithms that provide a range of strategic decision space FY 2022 to FY 2023 Increase/Decrease Statement: Effort ends FY22		0.600	0.200	-
Title: Safety Analysis of Modified Midwest Guardrail Description: Research and physical testing to gather and analyze data for improving Entry Control Facilities (ECF) design and operations, improve road safety on installations, and reduce overall costs FY 2022 Plans: Funding will establish entry control facilities ECF guardrail standards to mitigate terrorism/asymmetric threats FY 2023 Plans: Funding will establish entry control facilities ECF guardrail standards to mitigate terrorism/asymmetric threats FY 2022 to FY 2023 Increase/Decrease Statement: Effort ends FY22		0.000	0.800	0.350
Title: Data Lake Description: Develop and demonstrate the capability that allows incongruent data to be brought together to provide automated decision support. FY 2022 Plans: Funding will continue data analytics development FY 2023 Plans:		0.372	0.900	1.150

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Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640212 / <i>C2/OPTIMIZATION/MODELING AND SIMULATION</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
Funding will permit increase in data management FY 2022 to FY 2023 Increase/Decrease Statement: Increase in development schedule				
Title: End-to-End Deployment and Distribution Modeling Description: Provide an integrated deployment/distribution environment to provide continuous and optimal balancing of total demand verse capacity from planning through mission execution. FY 2022 Plans: Funding will allow model deployment and distribution FY 2023 Plans: Funding will allow model deployment and distribution FY 2022 to FY 2023 Increase/Decrease Statement: Funding skipped a year due to development schedule		2.600	0.000	0.350
Title: Massachusetts Institute of Technology Lincoln Labs Description: Partnership with MIT-LL to research efforts to improve enterprise operational architecture supporting high-end analytics, integrated information technology/data structures, understanding of cloud capabilities and multi-level cyber security defense. FY 2022 Plans: Continue effective secure operations enabled via data fusion frameworks and prototypes. FY 2023 Plans: Effort ends FY22 FY 2022 to FY 2023 Increase/Decrease Statement: Increase in development schedule		4.328	2.302	3.650
Title: Modeling & Simulation Innovation Description: Select student research/faculty-assisted projects (e.g., Joint Transportation Asset Scheduling Kit, Next Generation Cargo Capability, Applying Post Modern Portfolio Theory to Mitigate Risk in International Shipping, Optimal CH-47/C-130 Workload Balance, Remotely Piloted Aircraft Performing Airdrop Mission). FY 2022 Plans:		0.161	0.089	0.125

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Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640212 / <i>C2/OPTIMIZATION/MODELING AND SIMULATION</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
Collaboration partnership with AFIT for student research FY 2023 Plans: Collaboration partnership with AFIT for student research FY 2022 to FY 2023 Increase/Decrease Statement: Development varies by FY Increase in FY23				
Title: Infrastructure Information Confidence Model Description: Inform decision makers of the quality of primary and alternate data sources they are using to make decisions FY 2022 Plans: N/A FY 2023 Plans: Increase model capability FY 2022 to FY 2023 Increase/Decrease Statement: Decrease in development schedule		0.697	0.636	0.434
Title: Aerial Delivery and Autonomous Deployment of Unmanned Vehicles Description: Develop ability to deliver unmanned systems from existing airdrop systems FY 2022 Plans: Aerial Delivery and Autonomous Deployment of Unmanned Vehicles FY 2023 Plans: Aerial Delivery and Autonomous Deployment of Unmanned Vehicles FY 2022 to FY 2023 Increase/Decrease Statement: Development schedule increase		0.000	0.828	1.010
Title: Program Execution Description: Provide technical assistance and program management support to the USTRANSCOM RDT&E Program. FY 2022 Plans:		0.977	1.120	1.150

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022		
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640212 / <i>C2/OPTIMIZATION/MODELING AND SIMULATION</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>TRL 4-6: Program support to explore technology solutions to capability gaps identified through Joint Concept Development documents, the Joint capabilities Integration and Development System process, Joint Experimentation, etc, to increase the responsiveness, efficiency and effectiveness of the Joint Deployment and Distribution Enterprise.</p> <p>FY 2023 Plans: TRL 4-6: Program support to explore technology solutions to capability gaps identified through Joint Concept Development documents, the Joint capabilities Integration and Development System process, Joint Experimentation, etc, to increase the responsiveness, efficiency and effectiveness of the Joint Deployment and Distribution Enterprise.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Development schedule increase</p>				
<p>Title: Scheduling Mobility Aircrews for Readiness and Transportation</p> <p>Description: Develop prototype software for advanced squadron scheduling, collaboration, and predictive modeling.</p> <p>FY 2022 Plans: Continue to Develop prototype software for advanced squadron scheduling, collaboration, and predictive modeling.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Effort ends FY22</p>		0.700	0.513	-
<p>Title: Analyzer Driven Data Integrity</p> <p>Description: Increase data integrity</p> <p>FY 2023 Plans: begin plan design</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: FY23 New Start</p>		-	-	0.238
<p>Title: Strategic Theater Orchestration and Resource Management</p> <p>Description: Ability to manage theater lift assets</p> <p>FY 2023 Plans: Begin system design</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement:</p>		-	-	0.615

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022		
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640212 / <i>C2/OPTIMIZATION/MODELING AND SIMULATION</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
FY23 new start				
Title: Risk Assessment and Vetting for the Enterprise Description: Assessing deployment distribution risk FY 2023 Plans: Begin design phase FY 2022 to FY 2023 Increase/Decrease Statement: FY23 new start		-	-	0.700
Title: Component Level Operational Decision Advantage Description: develop detailed decision support tool FY 2023 Plans: Begin design plans FY 2022 to FY 2023 Increase/Decrease Statement: FY23 new start		-	-	0.500
Title: JDDE Mission Assurance Coordinator Description: Develop a JDDE-wide method for mission coordination FY 2023 Plans: Begin design development FY 2022 to FY 2023 Increase/Decrease Statement: FY23 new start		-	-	0.418
Title: Modeling Dynamics of Modular Causeways to Improve Debarkation Sites Description: High-fidelity model to provide planners with precise knowledge of Modular Causeway behavior. FY 2022 Plans: N/A FY 2022 to FY 2023 Increase/Decrease Statement:		0.300	0.000	-

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640212 / <i>C2/OPTIMIZATION/MODELING AND SIMULATION</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
Effort ended in FY21			
Accomplishments/Planned Programs Subtotals	14.412	24.958	15.587

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

N/A

Remarks

D. Acquisition Strategy

Requirements for joint deployment and distribution enterprise technology enhancements are annually identified, validated and prioritized by the Joint Deployment & Distribution Enterprise (JDDE) community. Pursuit of the development of new/improved capabilities to meet these requirements is managed by the United States Transportation Command (USTRANSCOM). Prototype products, once evaluated by the users, are spirally transitioned by the operational community.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Air Force **Date:** April 2022

Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640212 / <i>C2/OPTIMIZATION/MODELING AND SIMULATION</i>
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Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Integrated Logistics Support	Various	Various : Belleville, IL	-	14.412	Nov 2020	24.958	Nov 2021	15.587	Nov 2022	-		15.587	Continuing	Continuing	-
Subtotal			-	14.412		24.958		15.587		-		15.587	Continuing	Continuing	N/A

Remarks
Funds will be realigned within PE.

	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	14.412	24.958	15.587	-	15.587	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640212 / <i>C2/OPTIMIZATION/MODELING AND SIMULATION</i>

	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	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

<i>Deployment and Distribution</i>																												
Integrated Logistics Support																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640212 / <i>C2/OPTIMIZATION/MODELING AND SIMULATION</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Deployment and Distribution</i>				
Integrated Logistics Support	1	2021	4	2027

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force										Date: April 2022		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>				Project (Number/Name) 640213 / <i>CYBER</i>			
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
640213: <i>CYBER</i>	-	5.429	5.461	4.928	0.000	4.928	5.868	5.978	6.104	6.240	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program provides for the development, integration, demonstration and detailed assessment of capabilities to ensure USTRANSCOM mission assurance is in a persuasive/dynamic cyber environment. USTRANSCOM requires the procedures/technologies to improve cyber surveillance and control of networks across multiple domains and the ability to continue critical network operations in contested unclassified and classified network environments. The Command also needs the ability to differentiate between valid/unauthorized users and determine/quantify the trustworthiness of hardware/software systems. Additionally USTRANSCOM must have the ability to rapidly analyze & correlate data regarding malicious activities, select/evoke real-time defense actuators, perform automated reasoning capabilities that address data quality issues, and the ability to rapidly return to a known/safe operating state.

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, 0606398F. In FY21 0M was expended for civilian pay expenses in this program element (PE). In FY22, Joint Transportation Management System (JTMS) 15.5M was placed in this PE, for civilian pay expenses, until a separate PE could be established. No other FY will include civilian pay expenses in this PE.

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

	FY 2021	FY 2022	FY 2023
<p>Title: Oversight</p> <p>Description: Enable continuous tracking of adversary cyber groups and campaigns targeting USTRANSCOM and USINDOPACOM enterprise and their partners</p> <p>FY 2022 Plans: Funding will provide anomaly detection and predictive analysis to dynamically assess threats, attack vectors and adversary intent</p> <p>FY 2023 Plans: Funding will provide anomaly detection and predictive analysis to dynamically assess threats, attack vectors and adversary intent</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: R&D Development schedule increase</p>	-	0.665	2.330
<p>Title: Cyber Mission Assurance Technologies</p> <p>Description: Near real-time understanding of the operational impact of cyber risks, threats, and disruptions.</p> <p>FY 2022 Plans:</p>	-	0.590	2.598

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022		
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640213 / <i>CYBER</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>Funding will develop integrated analysis/decision processes involving complex ops/cyber data by selecting pre-approved actions and coordinating stakeholders in the fight-through of cyber risks/disruptions to executing missions and Cyber Critical Asset Lists</p> <p>FY 2023 Plans: Funding will develop integrated analysis/decision processes involving complex ops/cyber data by selecting pre-approved actions and coordinating stakeholders in the fight-through of cyber risks/disruptions to executing missions and Cyber Critical Asset Lists</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Development schedule increase</p>				
<p>Title: Lincoln Labs</p> <p>Description: Partnership with MIT-LL to research efforts to improve enterprise operational architecture supporting high-end analytics, integrated information technology/data structures, understanding of cloud capabilities and multi-level cyber security defense.</p> <p>FY 2022 Plans: Continue increased awareness and ability to respond to cyber events</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: NA</p>		5.429	4.206	-
Accomplishments/Planned Programs Subtotals		5.429	5.461	4.928
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
Requirements for joint deployment and distribution enterprise technology enhancements are annually identified, validated and prioritized by the Joint Deployment & Distribution Enterprise (JDDE) community. Pursuit of the development of new/improved capabilities to meet these requirements is managed by the United States Transportation Command (USTRANSCOM). Prototype products, once evaluated by the users, are spirally transitioned by the operational community.				

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640213 / <i>CYBER</i>

FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
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

<i>Deployment and Distribution</i>	
Integrated Logistics Support	

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640213 / <i>CYBER</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Deployment and Distribution</i>				
Integrated Logistics Support	1	2021	4	2027

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force **Date:** April 2022

Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640215 / <i>Transportation Management Service</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
640215: <i>Transportation Management Service</i>	-	0.000	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.200
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

Note
Joint Transportation Management Systems (JTMS) added to support FY22 development.

A. Mission Description and Budget Item Justification

JTMS will develop and configure a commercial-off-the-shelf (COTS) transportation/financial management product to deliver DoD enterprise-wide end-to-end transportation and transportation-related financial business process reform.

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

	FY 2021	FY 2022	FY 2023
Title: Transportation Financial Product Development	0.000	0.200	0.000
Description: JTMS will develop and configure a commercial-off-the-shelf (COTS) transportation/financial management product to deliver DoD enterprise-wide end-to-end transportation and transportation-related financial business process reform.			
FY 2022 Plans: Develop a transportation-related financial business process reform.			
FY 2023 Plans: R&D Development			
FY 2022 to FY 2023 Increase/Decrease Statement: Development schedule			
Accomplishments/Planned Programs Subtotals	0.000	0.200	0.000

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

N/A

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640215 / <i>Transportation Management Service</i>

D. Acquisition Strategy

Reforms the Defense Transportation System (DTS) by integrating financial and transportation transactions at the transactional level to effectively manage resources through a transportation requirement's plan to pay lifecycle. Program will improve resource management and budgeting accuracy, maximize buying power, strengthen financial management decision-making, and improve the Department's effort to achieve auditability.


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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Air Force												Date: April 2022			
Appropriation/Budget Activity 3600 / 4				R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>				Project (Number/Name) 640215 / <i>Transportation Management Service</i>							
Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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
Integrated Logistics Support	Various	Belleville, IL : IL	-	-		0.200	Nov 2021	0.000	Nov 2022	-		0.000	Continuing	Continuing	-
Subtotal			-	-		0.200		0.000		-		0.000	Continuing	Continuing	N/A
			Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		0.200		0.000		-		0.000	Continuing	Continuing	N/A
Remarks															
DoD enterprise end-to-end transportation and transportation-related financial business process reform.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640215 / <i>Transportation Management Service</i>

FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
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

<i>Integrated Logistics Support</i>	
Develop Transportation Products and Processes	

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604776F / <i>Deployment & Distribution Enterprise R&D</i>	Project (Number/Name) 640215 / <i>Transportation Management Service</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Integrated Logistics Support</i>				
Develop Transportation Products and Processes	1	2022	4	2023

Note
DoD enterprise end-to-end transportation and transportation-related financial business process reform.