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**Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>
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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	-	18.811	39.029	27.714	-	27.714	24.268	21.430	21.494	21.620	0.000	174.366
CY5: <i>CYBER Situational Understanding</i>	-	18.811	27.125	16.581	-	16.581	14.343	11.354	11.476	11.490	0.000	111.180
EV5: <i>Defensive CYBER Operations</i>	-	-	5.477	5.128	-	5.128	5.642	5.706	5.766	5.830	0.000	33.549
XU3: <i>Tactical DCO-I</i>	-	-	6.427	6.005	-	6.005	4.283	4.370	4.252	4.300	0.000	29.637

**Note**

These funding lines are directly aligned to the Army Network Modernization Priority. Cyber Situational Understanding (Cyber SU) funding line supports the Army Network Modernization Strategy Line of Effort (LOE), Common Operating Environment (COE). Defensive Cyber Operations (DCO) and Tactical DCO Infrastructure (TDI) funding line supports the Army Network Modernization Strategy LOE, Key Enabler for Unified Network.

**A. Mission Description and Budget Item Justification**

These funding lines are key enablers/direct supporters of the Army Modernization Strategy. FY2024 Defensive Cyber Tool Development budget line provides funding for Program Executive Office Command Control and Communications - Tactical (PEO C3T) Cyber Situational Understanding (Cyber SU) and Tactical DCO Infrastructure (TDI) as well as Program Executive Office Enterprise Information Systems (PEO EIS) DCO Development Environment (formerly Forge).

655041CY5:

- Cyber Situational Understanding (Cyber SU) is a software only, mission command application within the Command Post Computing Environment (CPCE) designed for use by maneuver commanders at the tactical level (Brigade to Army Service Component Command (ASCC)) to enable analytics, visualization, understanding and decision making to counter Cyber Electromagnetic Activity (CEMA) threats in multi-domain operations. This funding will be executed by PEO C3T.

655041EV5:

- Defensive Cyber Operations (DCO) consists of platform and software programs which are key elements of the DCO Maneuver Baseline infrastructure, platform, and tools. The employment of defensive capabilities creates specific effects in cyberspace through actions that allow commanders to achieve the following objectives: deter, destroy, and defeat enemy offensive cyberspace operations; gain time; economy of force; control key terrain; protect tasked critical assets and infrastructure; and develop intelligence. DCO supports the Army Cyber Command (ARCYBER), Information Warfare Operations Center (IWOC), (5) Regional Cyber Centers (RCCs), Cyber Warfare Battalion (CWB), Multi-Domain Task Force (MDTF), Cyber Protection Brigade (CPB), and (41) Cyber Protection Teams (CPTs) in COMPO 1/2/3. DCO Development Environment (DCODE) is both physical and/or virtual assets that provide integration and assessment capabilities during the development and integration phases of operations. These assets are centrally managed in order to provide accountability, modernization, standardization, software updating and patching and security posture in order to maintain the Authority to Operate (ATO). This funding will be executed by PEO EIS.

**UNCLASSIFIED**

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655041XU3:

- TDI is a software only program that consists of pre-configured DCO applications that enable local and remote Cyber defenders to conduct cyberspace surveillance, and maneuver against an adversary traversing within the tactical network. The TDI capability is hosted on the Army's Tactical Server Infrastructure (TSI) and will reside within the Command Post at the tactical level (Brigade to Army Service Component Commands (ASCC)). This funding will be executed by PEO C3T.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	18.811	33.029	17.664	-	17.664
Current President's Budget	18.811	39.029	27.714	-	27.714
Total Adjustments	0.000	6.000	10.050	-	10.050
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	6.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	10.050	-	10.050

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** CY5: *CYBER Situational Understanding*

Congressional Add: *Program Increase - Multi-factor authentication for cyber security*

Congressional Add Subtotals for Project: CY5

Congressional Add Totals for all Projects

	<b>FY 2022</b>	<b>FY 2023</b>
	-	6.000
	-	6.000
	-	6.000

**Change Summary Explanation**

Increase in funding in FY2023 for multi-factor authentication cyber security.

Increase in funding in FY2024 due to alignment of funds to Cyber SU per U.S. Cyber Command Enhanced Budget Control.

Increase in funding between FY2022 and FY2023 due to TDI funding transitioning from 0608041A CD 1 Defensive Cyber- Software Prototype Development (BA-8 Software Pilot Program) to a new project code XU3 (Tactical DCO-I) within PE 0605041A Defensive CYBER Tool Development.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>				<b>Project (Number/Name)</b> CY5 / <i>CYBER Situational Understanding</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>CY5: CYBER Situational Understanding</i>	-	18.811	27.125	16.581	-	16.581	14.343	11.354	11.476	11.490	0.000	111.180
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

This funding line is directly aligned to the Army Network Modernization Priority. This funding will be executed by Program Executive Office Command Control and Communications - Tactical (PEO C3T).

**A. Mission Description and Budget Item Justification**

Cyber SU is a software-only, mission command application designed for use by maneuver commanders at the tactical level (Infantry, Armor, Stryker Brigade Combat Teams, Division, Corps, and Army Service Component Commands). Cyber SU is the first application of its kind designed for maneuver commanders focusing on tactical/ expeditionary combat operations to detect and mitigate cyber and electronic warfare threats and assist with decision making during combat operations.

Cyber SU produces a Cyber Electromagnetic Activity (CEMA) overlay on the commander's Common Operational Picture (COP) within the Command Post Computing Environment (CPCE) software, and is integrated on the Tactical Server Infrastructure (TSI) framework. Unlike Enterprise Cyber Mission Force(s) Tools, Cyber SU was designed using the CPCE Software Development Kit (SDK), to operate within the constraints of TSI hardware, a bandwidth constrained tactical environment, and support Common Operating Environment (COE) standards on the Army's Command Post. The underlying Cyber SU framework is also being leveraged by the Air Force to ensure alignment with the Army and Air Force Combined Joint All Domain Command and Control (CJADC2). The Army will ensure Cyber SU has an open systems architecture and will continue to explore options to integrate Cyber SU functionality and data ingests between other Services as well as explore insertion of third-party technology within the Cyber SU solution.

Cyber SU provides the maneuver commander the ability to visualize and understand any cyber related impacts/threats to physical (geographical), logical (at a specific network internet protocol), and cyber persona layers (bad actors, from individuals to nation states) of tactical cyberspace data. Supporting CEMA, Cyber SU ingests existing data sources from related programs (e.g, Tactical Defense Cyber Operations Infrastructure, Command Post Computing Environment, Electronic Warfare Planning and Management Tool, Unified Network Operations, Distributed Common Ground System-Army, Data Distribution System), synchronizes and integrates blue (friendly), red (enemy), and grey (commercial/ private sector data), and enables collaboration therein at the tactical edge.

Cyber SU follows a five-year, Information Technology (IT) Box construct to deliver capability over time, based on approved requirements. In the current IT Box (FY2020 - FY2024), Cyber SU is being developed in three capability drops (CDs): See Yourself (Initial Capability), See Your Cyber Battlespace (CD 1), and Understand Your Cyber Battlespace (CD 2). Each capability drop builds upon the previous drop in order to deliver the full capability at the end of the five years. Cyber SU Initial Capability provides the Tactical Maneuver Commander and CEMA work group a user interface within the CPCE COP that shares friendly operations cyberspace activity including network and computer health/status. The CD 1 user interface expands to include visualization of enemy CEMA operations. The CD 2 capability incorporates advanced features and analytics to comprehend the meaning of cyber activity and facilitate response actions. This allows for proactive decision making in support multi-domain

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<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> CY5 / <i>CYBER Situational Understanding</i>
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operations. Capability will continue to evolve in alignment with warfighter needs with the renewal of the IT Box in FY2024 for the following five-year term (FY2025 - FY2029).

Cyber SU FY2024 funding supports the completion of development, testing and post-test fix/ integration to allow for the delivery of the Cyber SU CD 2 capability planned in 4QFY2024.

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

	FY 2022	FY 2023	FY 2024
<p><b>Title:</b> Development Engineering and Integration</p> <p><b>Description:</b> Leverage industry developed prototype software, as well as ingest and synchronize cyber data from multiple Program of Record (PoRs) to develop and engineer the Cyber SU capability.</p> <p><b>FY 2023 Plans:</b> FY2023 funding supports the completion of CD 1 post- test fix and integration to allow for the delivery of the Cyber SU CD 1 capability planned in FY2023. The CD 1 capability user interface expands to allow the Tactical Maneuver Commander and CEMA work group the ability to visualize enemy CEMA operations. Funding also supports the development of systems engineering/ architecture products, middleware and back-end services required to establish the Cyber SU CD 2 capability. The CD 2 capability incorporates advanced features and analytics to comprehend the meaning of cyber activity and facilitate response actions. This allows for the Tactical Maneuver Commanders and CEMA staff to make proactive decisions in support of multi-domain operations.</p> <p><b>FY 2024 Plans:</b> FY 2024 funding supports the completion of development of systems engineering/ architecture products, middleware and back-end services required to establish the Cyber SU CD 2 capability. Funding also supports CD 2 post- test fix and integration to allow for the delivery of the Cyber SU CD 2 capability planned in 4QFY2024. The CD 2 capability incorporates advanced features and analytics to comprehend the meaning of cyber activity and facilitate response actions. This allows for proactive decision making in support of multi- domain operations.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding decrease reflects reduction in product development efforts as the CD2 capability build is completed during FY2024.</p>	14.992	15.909	9.678
<p><b>Title:</b> Systems Test and Evaluation</p> <p><b>Description:</b> Efforts include the planning and execution of T&amp;E events including Developmental Test, Interoperability Testing, Software Acceptance Testing, Integration Events, Risk Reduction Events, and User Tests/Evaluations.</p> <p><b>FY 2023 Plans:</b></p>	1.375	2.653	3.591

**UNCLASSIFIED**

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p>FY 2023 funding will allow for the continued developmental operations (DevOps), developmental testing (DT), operational assessment (OA), interoperability testing and cybersecurity assessments of the Cyber SU CD 1 capability.</p> <p><b>FY 2024 Plans:</b> FY 2024 funding will support continued developmental operations (DevOps) activities, developmental testing (DT), operational assessment (OA), interoperability testing, and cybersecurity assessments of the Cyber SU CD 2 capability. Funding also supports Army Test and Evaluation Command (ATEC) Army Evaluation Center (AEC) requirement for DT instrumentation.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding increase reflects increase in test support and instrumentation required for planned test events to support delivery of CD 2, finalizing the full deployment of the FY2020-2024 IT Box.</p>				
<p><b>Title:</b> Training Development</p> <p><b>Description:</b> The development of training support products, including coordination with US Army Training and Doctrine Command (TRADOC) US Army Cyber Command, PORs, and related organizations to develop applicable program of instruction.</p> <p><b>FY 2023 Plans:</b> FY 2023 funding provides for the development of the New Equipment Training (NET) support package, verification/validation, software user manuals/tech manuals and virtual training development for Cyber SU CD 2.</p> <p><b>FY 2024 Plans:</b> FY 2024 funding provides for the completion of development of the New Equipment Training (NET) support package, verification/validation, software user manuals/tech manuals and virtual training development for the FY2020-2024 IT Box.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding increase reflects development of comprehensive training products that include all capabilities over the three deployed CDs.</p>		0.659	0.776	1.540
<p><b>Title:</b> Systems Engineering/Management</p> <p><b>Description:</b> Systems Engineering/Management includes business, technical and logistical staff support and overall management of program execution, major events and reporting.</p> <p><b>FY 2023 Plans:</b> FY 2023 funding provides for program office staff (matrix and contractor) continued program execution support and to perform duties necessary to plan and execute activities and milestone events to include the delivery of CD1 in FY2023.</p> <p><b>FY 2024 Plans:</b></p>		1.785	1.787	1.772

**UNCLASSIFIED**

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2022	FY 2023	FY 2024
FY 2024 funding provides for program office staff (matrix and contractor) continued program execution support and performance of duties necessary to plan and execute activities and milestone events to include the delivery of CD 2 in 4QFY2024.			
<b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Funding remains relatively constant.			
<b>Accomplishments/Planned Programs Subtotals</b>	18.811	21.125	16.581

	FY 2022	FY 2023
<b><i>Congressional Add:</i></b> Program Increase - Multi-factor authentication for cyber security	-	6.000
<b><i>FY 2023 Plans:</i></b> Congressional Interest Item funding provided for Multi-factor authentication for cyber security.		
<b>Congressional Adds Subtotals</b>	-	6.000

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

N/A

**Remarks**

N/A

**D. Acquisition Strategy**

The Cyber SU Information System-Initial Capabilities Document was approved on 18 July 2018 by the Joint Requirements Oversight Council. The Requirements Definition Package (RDP) was approved on 19 March 2019 by the Army Requirements Oversight Council Requirements Board. The program is utilizing an evolutionary and tailored acquisition approach under which Cyber SU will develop a series of testable, integrated subsets of capability to meet the overall full functional values of the RDP through the use of Capability Drops (CDs). Subsequent CDs are to be approved by the U.S. Army Cyber Center of Excellence in collaboration with U.S. Army Forces Command. Under this Information Technology (IT) Box requirements construct, the Cyber SU program is currently executing the first five (5) year term FY 2020-FY 2024 (includes initial capability, CD1 and CD 2). The IT Box will be renewed in FY 2024 for the following five-year term FY 2025-FY 2029 (includes future CD's).

The Program Executive Office, Command, Control and Communications-Tactical, Milestone Decision Authority, approved the Materiel Development Decision on 20 June 2018, designating Cyber SU as an Acquisition Category (ACAT) III program. Cyber SU entered the Engineering and Manufacturing Development phase of the Acquisition Lifecycle with MDA approval of Milestone B conducted March 2020, and codified in an Acquisition Decision Memorandum 08 April 2020. Full Deployment for IT Box FY 2020-FY 2024 is achieved with completion of CD 2. Cyber SU Full Deployment is defined as when Cyber SU has completed the development and testing of the last capability drop within the IT Box and has transferred the capability to the Command Post Computing Environment (CPCE/TSI) program to commence fielding. Execution of the Cyber SU program will be a combination of government entities and commercial vendors.

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<p>The program awarded a competitive prototyping/development Other Transaction Authority (OTA) in 3QFY2020 in order to develop the initial Cyber SU capability. An OTA modification was awarded in June 2021, which extended the scope of the OTA to encompass CD 1 and CD 2 through Full Deployment FY2024. Cyber SU plans to ingest data from related programs (e.g, Tactical Defense Cyber Operations Infrastructure, Command Post Computing Environment, Electronic Warfare Planning and Management Tool, Unified Network Operations, Distributed Common Ground System-Army, Data Distribution System), Coordination and integration with complimentary programs and systems (sources of cyber data feeds) is an integral part of the program to ensure the data is made available to be consumed by Cyber SU.</p> <p>Cyber SU will be hosted on the Tactical Server Infrastructure (TSI) and will be fielded by the CPCE/TSI program in accordance with their fielding schedule.</p>		

**UNCLASSIFIED**

**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> CY5 / <i>CYBER Situational Understanding</i>
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<b>Management Services (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Systems Engineering/Management	Various	CACI; DEVCOM; CECOM : APG, MD	2.882	1.785	Mar 2022	1.787	Mar 2023	1.772	Mar 2024	-		1.772	Continuing	Continuing	-
<b>Subtotal</b>			2.882	1.785		1.787		1.772		-		1.772	Continuing	Continuing	N/A

**Remarks**  
 Development Engineering and Integration decrease reflects reduction in product development efforts as the CD2 capability build is completed during FY 2024.  
 Systems Test and Evaluation increase reflects increase in test support and instrumentation required for planned test events to support delivery of CD 2, finalizing the full deployment of the FY2020-2024 IT Box.  
 Training Development increase reflects development of comprehensive training products that include all capabilities over the three deployed CDs.  
 Funding remains relatively constant from FY2023 to FY2024

<b>Product Development (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Software Development	C/FFP	Research Innovations Inc (RII) : Alexandria, VA	-	7.491	Jan 2022	10.250	Jan 2023	4.938	Nov 2023	-		4.938	Continuing	Continuing	-
Software Engineering	Various	CACI; DEVCOM DAC : APG, MD; Picatinny, NJ	-	2.074	Jan 2022	2.117	Dec 2022	1.757	Dec 2023	-		1.757	Continuing	Continuing	-
Software Integration	Various	Parsons; Various Matrix Orgs : APG, MD	-	2.416	Feb 2022	3.077	Dec 2022	2.703	Dec 2023	-		2.703	Continuing	Continuing	-
Developmental Hardware and Software	C/Various	CHS; CHES; DITCO : APG, MD; Ft. Belvoir, VA; Scott APB, IL	-	3.011	May 2022	0.465	Jan 2023	0.280	Oct 2023	-		0.280	Continuing	Continuing	-
Multi-factor authentication cyber security	TBD	TBD : TBD	-	-		6.000		-		-		-	0.000	6.000	-
<b>Subtotal</b>			-	14.992		21.909		9.678		-		9.678	Continuing	Continuing	N/A

**Remarks**  
 Contract award date reflects when the first incremental funding is expected to be obligated in the Fiscal Year.

**UNCLASSIFIED**

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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
<p>Software Development decreased due to reduction in software development required for FY2024.                      Software Integration costs includes CPCE Program of Record (PoR) Integration Engineering and PoR Data Integration                      Software Integration cost decreased due to efficiencies between shared support with CPCE program.                      Software Engineering costs include design, architecture and engineering personnel.                      Software Engineering costs decreased due to shared support with other PM MC programs.                      Developmental Hardware (HW) and Software (SW) includes Developmental HW, Developmental SW and Developmental lab equipment.                      New Developmental HW and associated SW is required every 4-5 years to ensure development on upgraded platforms. In the interim years, only SW renewals and developmental lab equipment will be required, as with FY2024.                      Developmental HW and SW decreased in FY 2024 due to needing to renew less SW licenses than originally planned.</p>															

<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Training Development	Various	DLA; Parsons; ILSC : Philadelphia, PA; APG, MD	0.765	0.659	Jun 2022	0.776	Jun 2023	1.540	Jan 2024	-		1.540	Continuing	Continuing	-
<b>Subtotal</b>			0.765	0.659		0.776		1.540		-		1.540	Continuing	Continuing	N/A

**Remarks**  
 Contract award date reflects when the first incremental funding is expected to be obligated in the Fiscal Year.  
 Training Development includes Training Development, Software User Manuals, Training Validation/Verification and virtual training development.  
 Funding increase in FY 2024 due to increase in training development and virtual training for CD 2.

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Integration/Interoperability/Operational Assessment	Various	Future Skies; Decision Engineering; ATEC; CTSF : Picatinny, NJ; APG, MD; Ft. Hood, TX	0.979	0.353	Mar 2022	1.527	Dec 2022	2.115	Nov 2023	-		2.115	Continuing	Continuing	-

**UNCLASSIFIED**

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<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
IA/Test Support	C/FFP	CACI : APG, MD	1.036	0.728	Mar 2022	0.823	Dec 2022	1.109	Nov 2023	-		1.109	Continuing	Continuing	-
Cybersecurity Assessments	Various	DEVCOM DAC; TSMO : APG, MD; Redstone Arsenal, AL	0.328	0.294	Feb 2022	0.303	Nov 2022	0.367	Nov 2023	-		0.367	Continuing	Continuing	-
<b>Subtotal</b>			2.343	1.375		2.653		3.591		-		3.591	Continuing	Continuing	N/A

**Remarks**  
 Contract award date reflects when the first incremental funding is expected to be obligated in the Fiscal Year.  
 Integration/Interoperability Test includes Army Evaluation Center (AEC) Support and Program of Record (PoR) Integration Testing.  
 Interoperability Testing and Operational Assessments were not required in FY 2022.  
 Funding increase in FY2024 Operational Assessments due to the ATEC AEC requirement for DT instrumentation  
 Funding increase in FY2024 test support is due to the need for additional test/evaluation personnel at test events to support CD 2 delivery in 4QFY2024.

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	5.990	18.811	27.125	16.581	-	16.581	Continuing	Continuing	N/A

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Army</b>		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> CY5 / <i>CYBER Situational Understanding</i>

Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	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
Development/Integration/Fixes-Initial Capability Drop	█ DevInt./Fix-Initial																											
Testing-Initial Capability Drop	█ Testing-Initial																											
Initial Capability Delivery					▲ Initial Capability Delivery																							
Development/Integration/Fixes- Capability Drop 1	█				█																							
Testing-Capability Drop 1					█																							
Delivery of Capability Drop 1					▲ Delivery-CD1																							
Development/Integration/Fixes- Capability Drop 2					█				█																			
Testing-Capability Drop 2									█																			
Delivery of Capability Drop 2													▲ Delivery-CD2															
Development Contract IT Box- FY25-29													█				█				█							

**Note**  
Information Technology (IT) Box requirements construct, the Cyber SU program is currently executing the first five (5) year term FY 2020-FY 2024 (includes initial capability, CD1 and CD 2). The IT Box will be renewed in FY 2024 for the following five-year term FY 2025-FY 2029 (includes future CD's).

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> CY5 / <i>CYBER Situational Understanding</i>

Cyber SU will be hosted on the Tactical Server Infrastructure (TSI) and will be fielded by the CPCE/TSI program in accordance with the Army fielding schedule. Cyber SU delivery is defined as when Cyber SU provides the capability to CPCE/TSI to begin fielding.

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> CY5 / <i>CYBER Situational Understanding</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
RDP Approval	2	2019	2	2019
Milestone B Approval	3	2020	3	2020
Development/Integration/Fixes-Initial Capability Drop	3	2020	2	2022
Testing-Initial Capability Drop	2	2021	2	2022
Initial Capability Delivery	4	2022	4	2022
Development/Integration/Fixes- Capability Drop 1	4	2021	3	2023
Testing-Capability Drop 1	3	2022	3	2023
Delivery of Capability Drop 1	4	2023	4	2023
Development/Integration/Fixes- Capability Drop 2	4	2022	4	2024
Testing-Capability Drop 2	1	2024	4	2024
Delivery of Capability Drop 2	4	2024	4	2024
Development Contract IT Box- FY25-29	1	2025	4	2028

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>				<b>Project (Number/Name)</b> EV5 / <i>Defensive CYBER Operations</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>EV5: Defensive CYBER Operations</i>	-	-	5.477	5.128	-	5.128	5.642	5.706	5.766	5.830	0.000	33.549
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Defensive Cyber Operations (DCO) supports the Army Network Modernization Strategy Line of Effort (LOE) Key Enabler for the Unified Network. These efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

Defensive Cyber Tools and Analytics:

\* DCO - DCO Development Environment (DCODE Forge) // (PEO EIS)

655041EV5:

- Defensive Cyber Operations (DCO) consists of platform and software programs which are key elements of the DCO Maneuver Baseline infrastructure, platform, and tools. The employment of defensive capabilities creates specific effects in cyberspace through actions that allow commanders to achieve the following objectives: deter, destroy, and defeat enemy offensive cyberspace operations; gain time; economy of force; control key terrain; protect tasked critical assets and infrastructure; and develop intelligence. DCO supports the Army Cyber Command (ARCYBER), Information Warfare Operations Center (IWOC), (5) Regional Cyber Centers (RCCs), Cyber Warfare Battalion (CWB), Multi-Domain Task Force (MDTF), Cyber Protection Brigade (CPB), and (41) Cyber Protection Teams (CPTs) in COMPO 1/2/3.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> DCO - Development Environment (formerly Forge) (PEO EIS)	-	5.477	5.128
<b>Description:</b> DCO Development Environment (DCODE) (formerly Forge) is both physical and virtual assets that provides continual integration, upgrade, assessment, optimization in support of the warfighter's operational environment. Its purpose is to provide centralized lifecycle management and consist of the following capabilities: 1) the physical and/or virtual assets that provide integration and assessment capabilities during the development and integration phases of operations. These assets are centrally managed in order to provide accountability, modernization, standardization, software updating and patching and security posture in order to maintain the Authority to Operate (ATO); 2) provides the capability for Cyber Protection Teams (CPTs) to remotely access multiple networks, simultaneously, thru a safe and secure infrastructure framework.			
<b>FY 2023 Plans:</b> FY2023 funding continues to provide physical and/or virtual assets that provide integration and assessment capabilities during the development and integration phases of operations. These assets are centrally managed in order to provide accountability,			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> EV5 / <i>Defensive CYBER Operations</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
modernization, standardization, software updating and patching, and security posture in order to maintain the Authority to Operate (ATO)			
<b><i>FY 2024 Plans:</i></b> FY2024 funding continues to provide physical and/or virtual assets that provide integration and assessment capabilities during the development and integration phases of operations. These assets are centrally managed in order to provide accountability, modernization, standardization, software updating and patching, and security posture in order to maintain the Authority to Operate (ATO). Delivery the capability for Cyber Protection Teams (CPTs) to remotely access multiple networks, simultaneously, through a safe and secure infrastructure framework while maintaining the security of the production environment. Perform the integration of containers into the GDP, and DDS-Ms.			
<b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> FY2024 funding decreases due to Army reprioritization			
<b>Accomplishments/Planned Programs Subtotals</b>	-	5.477	5.128

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• B63103: <i>Advanced Cyber Tool Development</i>	27.389	-	13.848	-	13.848	16.144	20.942	20.626	20.643	Continuing	Continuing
• B66350: <i>ARCYBER DEFENSIVE CYBER OPERATIONS</i>	-	18.239	0.000	-	0.000	-	-	-	-	0.000	18.239
• B89001: <i>Insider Threat Program - Unit Activity Monitoring</i>	-	1.796	1.502	-	1.502	1.753	1.760	1.761	1.763	0.000	10.335
• 0608041A: <i>Defensive CYBER - Software Prototype Development</i>	108.041	94.831	83.570	-	83.570	72.059	71.660	72.447	72.559	0.000	575.167

**Remarks**  
 OPA PE B63103 - DCO hardware procurement, fielding, and equipment training for Garrison DCO Platform (GDP), Deployable Defensive Systems (DDS), and DCODE Armory.  
 OPA PE B66350 (New OPA budget line in FY2023) - DCO hardware procurement, fielding, and equipment training for GDP, DDS, and DCODE Armory.  
 OPA PE B89001 - DCO Insider Threat Program - Unit Activity Monitoring for UAM operations conducted in support of the Army's insider threat program.  
 RDTE PE 0608041A - DCO Software Prototype Development.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> EV5 / <i>Defensive CYBER Operations</i>

**D. Acquisition Strategy**

The DCO Information System Initial Capabilities Document was approved on 19 December 2017 by the Army Requirements Oversight Council (AROC). DCO programs are under an IT Box construct with five year term (FY2018-FY2022) which aligns with current Requirements Definition Packages (RDPs). IT Box establishes funding thresholds, by appropriation, for a program over a capability's projected lifecycle of five (5) years. FY2018-2022 IT Box expired in 4QFY2022. FY2023-2027 IT Box Revalidation in staffing for approval.





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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> EV5 / <i>Defensive CYBER Operations</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DCO - Tactical DCO-Infrastructure (TDI) - RDP Approval	3	2018	3	2018
DCO - TDI Development/Integration/Testing-Initial	1	2019	4	2019
DCO - TDI- Initial Capability Delivery	1	2020	1	2020
DCO - TDI Development/Integration/Testing-CD 1	4	2019	4	2020
DCO- Cyberspace Analytics RDP Approval	3	2018	3	2018
DCO - Cyberspace Analytics POR Award	1	2019	1	2019
DCO - Cyberspace Analytics POR Contract	2	2019	4	2020
DCO - Cyberspace Analytics Capability Drop #1	1	2019	1	2019
DCO - Cyberspace Analytics Capability Drop #2	2	2019	2	2019
DCO - Cyberspace Analytics Capability Drop #3	3	2019	3	2019
DCO - Mission Planning RDP Approved	3	2018	3	2018
DCO - Mission Planning POR Award	1	2019	1	2019
DCO - Mission Planning POR Contract	2	2019	4	2020
DCO - Mission Planning Capability Drop #1	4	2019	4	2019
DCO - Mission Planning Capability Drop #2	1	2020	1	2020
DCO - Mission Planning Capability Drop #3	2	2020	2	2020
DCO - User Activity Monitoring Prototype Award	1	2019	4	2019
DCO - User Activity Monitoring RDP Approval	1	2019	1	2019
DCO - User Activity Monitoring POR Award	1	2020	1	2020
DCO - User Activity Monitoring POR Contract	1	2020	4	2020
DCO - User Activity Monitoring Employ on CASE Network	1	2020	2	2020
DCO - User Activity Monitoring Integrate with BDP	2	2020	3	2020

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2024 Army **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> EV5 / <i>Defensive CYBER Operations</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
DCO - User Activity Monitoring Behavioral Analytics	3	2020	4	2020
DCO - Threat Emulation RDP Approval	1	2020	1	2020
DCO - Threat Emulation Program of Record	1	2020	4	2020
DCO - Development Environment (formerly Forge)	1	2019	4	2027
DCO - Management Services	1	2019	4	2020
DCO - ARCYBER Rapid Cyber Prototyping (DRUID)	3	2020	2	2021
DCO - ARCYBER Rapid Cyber Prototyping (Inception)	4	2020	4	2021

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>				<b>Project (Number/Name)</b> XU3 / <i>Tactical DCO-I</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
XU3: <i>Tactical DCO-I</i>	-	-	6.427	6.005	-	6.005	4.283	4.370	4.252	4.300	0.000	29.637
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

This funding line is directly aligned to the Army Network Modernization Priority. This funding will be executed by Program Executive Office Command Control and Communications - Tactical (PEO C3T).

Beginning in FY2023, TDI funding transitioned from 0608041A CD 1 Defensive Cyber- Software Prototype Development (BA-8 Software Pilot Program) to project code XU3 (Tactical DCO-I) within PE 0605041A Defensive CYBER Tool Development. TDI is funded with RDT&E only for development, engineering, testing, training development, and program management.

TDI FY2021-2022 funding is within PE 0608041A, Project code CD1 (BA8 Software Pilot).  
TDI FY2023 and beyond funding is within PE 0605041, Project code XU3 (Tactical DCO-I).

**A. Mission Description and Budget Item Justification**

TDI is a software only program that pre-configures DCO applications to allow local and remote Cyber defenders the ability to conduct cyberspace surveillance and maneuver against an adversary traversing within the tactical network. The TDI capability is hosted on the Army's Tactical Server Infrastructure (TSI) and will reside within the Command Post at the tactical level (Brigade to Army Service Component Commands (ASCC)).

The TDI capability includes: 1) Mission Protection: Ability to automate deployment of DCO tools to protect the virtual server environment of the Command Post Computing Environment (CPCE). 2) Discovery/Counter-Infiltration: Ability to auto detect multiple virtual cyber threats and facilitate the mitigation/denial of adversarial actions. 3) Cyberspace Support/Readiness: Allow global and regional cyberspace defenders to assist units with countering advanced persistent threats.

TDI follows a five-year, Information Technology (IT) Box construct to deliver capability over time, based on approved requirements. In IT Box (FY2023-2027), TDI will develop Capability Releases (CR) (CR 1 - CR 4) to implement TDI software change activities and updates to provide value to Brigades - ASCCs more quickly. CR 1 will collate and aggregate TDI data from various echelons and present it into a rolled-up status with dashboards reflecting various roles and responsibilities. CR 2 will integrate Security Orchestration, Automation, and Response (SOAR) and with Big Data Platform (BDP) to initiate alignment with the Army's tactical data fabric efforts. CR 3 will leverage Artificial Intelligence/Machine Learning (AI/ML) models generated from BDP and implement it at the tactical edge. CR 4 will support capabilities and technologies to address emerging cyber threats and techniques, tactics, and procedures (TTPs).

TDI FY 2024 funding supports the completion of development, engineering, testing, training development and program management required to establish the first Capability Release (CR) of the following IT Box FY 2023- FY 2027 in support of CR 1 delivery, planned for FY2024. FY 2024 funding will also support the initial development, engineering, testing, training development and program management of CR 2 in support of FY2025 delivery.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> XU3 / <i>Tactical DCO-I</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p><b>Title:</b> Development Engineering</p> <p><b>Description:</b> Efforts include development engineering and integration required for DCO tools to be utilized on the Tactical Network.</p> <p><b>FY 2023 Plans:</b> FY2023 funding supports the initial development engineering and integration of Capability Release 1 (CR 1) in support of FY2024 delivery. CR 1 will collate and aggregate TDI data from various echelons and present it into a rolled-up status with dashboards reflecting various roles and responsibilities. Funding will also support the initial development engineering of CR 2. CR 2 will integrate Security Orchestration, Automation, and Response (SOAR) and with Big Data Platform (BDP) to initiate alignment with the Army's tactical data fabric efforts.</p> <p><b>FY 2024 Plans:</b> FY2024 funding supports the completion of development engineering and integration of Capability Release 1 (CR 1) in support of 4QFY2024 delivery. CR 1 will collate and aggregate TDI data from various echelons and present it into a rolled-up status with dashboards reflecting various roles and responsibilities. Funding will also support the continued development of CR 2 in support of FY 2025 delivery. CR 2 will integrate Security Orchestration, Automation, and Response (SOAR) and with Big Data Platform (BDP) to initiate alignment with the Army's tactical data fabric efforts.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding decreased due to reduction in software development and engineering efficiencies in second year of contract award.</p>		-	4.575	4.059
<p><b>Title:</b> Systems Test and Evaluation</p> <p><b>Description:</b> Efforts include the planning and execution of T&amp;E events including Developmental Test, Interoperability Testing, Software Acceptance Testing, Integration Events, Risk Reduction Events, Operational Assessments, Information Assurance and User Tests/Evaluations.</p> <p><b>FY 2023 Plans:</b> FY 2023 funding will allow for the user testing of the TDI CD 3 capability. Funding will also support developmental testing and interoperability testing of the TDI CR 1 capability, in order to gain data and feedback to inform development (test fix test) and support the delivery of CR 1 in FY2024.</p> <p><b>FY 2024 Plans:</b> FY 2024 funding will allow for the operational testing and cybersecurity testing of the TDI CR 1 capability in order to support delivery in 4QFY2024. Funding will also support developmental testing of the TDI CR 2 capability.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b></p>		-	1.013	0.993

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> XU3 / <i>Tactical DCO-I</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Funding remains relatively constant.				
<p><b>Title:</b> Training Development</p> <p><b>Description:</b> The development of training support products, including coordination with US Army Training and Doctrine Command (TRADOC) US Army Cyber Command, PORs, and related organizations to develop applicable program of instruction.</p> <p><b>FY 2023 Plans:</b> FY 2023 funding provides for the development of the New Equipment Training (NET) support package to include verification/validation, software user manuals/technical manuals and virtual training in support of TDI CR 1 delivery in FY2024.</p> <p><b>FY 2024 Plans:</b> FY 2024 funding provides for the development of the New Equipment Training (NET) support package to include verification/validation, software user manuals/technical manuals and virtual training in support of TDI CR 2 delivery in FY 2025.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding increase due to increased support of virtual training of CR 1 and virtual training development of CR 2.</p>		-	0.240	0.521
<p><b>Title:</b> Systems Engineering/Management</p> <p><b>Description:</b> Systems Engineering/Management includes business, technical and logistical staff support and overall management of program execution, major events and reporting.</p> <p><b>FY 2023 Plans:</b> FY 2023 funding provides for program office staff (matrix and contractor) continued program execution support and to perform duties necessary to plan and execute activities and milestone events associated with completion of the current TDI IT Box FY2018- FY2022.</p> <p><b>FY 2024 Plans:</b> FY 2024 funding provides for program office staff (matrix and contractor) continued program execution support and to perform duties necessary to plan and execute activities and milestone events leading up to CR 1 delivery in 4QFY2024.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding decrease in FY 2024 due to efficiencies through shared personnel with other Army Mission Command programs.</p>		-	0.599	0.432
<b>Accomplishments/Planned Programs Subtotals</b>		-	6.427	6.005
<b>C. Other Program Funding Summary (\$ in Millions)</b>				
N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605041A / Defensive CYBER Tool Development	Project (Number/Name) XU3 / Tactical DCO-I

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

**Remarks**

**D. Acquisition Strategy**

The Milestone Decision Authority (MDA), approved the Materiel Development Decision (MDD) on 13 April 2018, designating Tactical DCO Infrastructure (TDI) as an ACAT III program. The MDA approved a tailored defense unique software intensive acquisition approach for TDI. On 23 November 2021, the MDA approved delegation of the TDI program to the Program Manager (PM) and re-designation of the program to an ACAT IV.

The TDI program is under an Information Technology (IT) Box construct with a five (5) year term, with multiple CDs within each IT Box. The first IT Box covered FY 2018- FY 2022. The TDI program achieved initial capability delivery 1QFY2020. Full Deployment for IT Box FY 2018-FY 2022 is planned for 3QFY2023 with the completion of Capability Drop (CD) 3. TDI Full Deployment is defined as when TDI has completed the development and testing of the last capability drop within the IT Box and has transferred the capability to the Command Post Computing Environment/Tactical Services Infrastructure (CPCE/TSI) program to commence fielding.

IT Box (FY 2023-FY 2027) includes Capability Releases to implement TDI software change activities and updates aimed at provide value software to Brigades - ASCCs more quickly. A Capability Release (CR) includes software enhancements, software maintenance (defect repair, adaptations, updates, and reconfiguration), and cybersecurity updates. CR 1 will collate and aggregate TDI data from various echelons and present it into a rolled-up status with dashboards reflecting various roles and responsibilities. CR 2 will integrate Security Orchestration, Automation, and Response (SOAR) and with Big Data Platform (BDP) to initiate alignment with the Army's tactical data fabric efforts. CR 3 will leverage Artificial Intelligence/Machine Learning (AI/ML) models generated from BDP and implement it at the tactical edge. CR 4 will support capabilities and technologies to address emerging cyber threat and techniques, tactics, and procedures (TTPs).

Execution of the TDI program will be a combination of government entities and commercial vendors. TDI will be hosted on the Tactical Server Infrastructure (TSI) and will be fielded by the CPCE/TSI program in accordance with the Army fielding schedule.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> XU3 / <i>Tactical DCO-I</i>
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<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Systems Engineering/ Management	Various	CACI; CECOM : APG, MD	-	-		0.599	Dec 2022	0.432	Dec 2023	-		0.432	Continuing	Continuing	-
<b>Subtotal</b>			-	-		0.599		0.432		-		0.432	Continuing	Continuing	N/A

**Remarks**  
 Systems Engineering/ Management includes Technical, Logistics and Program Management Staff.  
 Funding decrease in FY 2024 due to efficiencies through shared personnel with other Army mission command programs.  
 Contract award date reflects when the first incremental funding is expected to be obligated in the Fiscal Year.

<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Software Development	C/TBD	TBD- Contract will be re-competed through DIU OTA : TBD	-	-		2.748	Mar 2023	2.773	Dec 2023	-		2.773	Continuing	Continuing	-
Software Engineering	Various	CECOM; CACI; PEO C3T : APG, MD	-	-		1.472	Nov 2022	1.142	Nov 2023	-		1.142	Continuing	Continuing	-
Developmental Hardware/ Software	Various	CHS;CHESS : Ft. Belvoir, VA	-	-		0.355	Jan 2023	0.144	Jan 2024	-		0.144	Continuing	Continuing	-
<b>Subtotal</b>			-	-		4.575		4.059		-		4.059	Continuing	Continuing	N/A

**Remarks**  
 Software engineering decreased due to reduced requirement for engineering support.  
 New Developmental HW and associated SW is required every 4-5 years for developmental labs. In the interim years, only software renewals are required for developmental lab equipment. Funding decreased due to reduction in software development and engineering efficiencies in second year of contract award.  
 Contract award date reflects when the first incremental funding is expected to be obligated in the Fiscal Year.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> XU3 / <i>Tactical DCO-I</i>
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<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Training Development	Various	DLA;ILSC : Philadelphia, PA; APG, MD	-	-		0.240	Jun 2023	0.521	Nov 2023	-		0.521	Continuing	Continuing	-
<b>Subtotal</b>			-	-		0.240		0.521		-		0.521	Continuing	Continuing	N/A

**Remarks**  
Funding increase due to increased support of virtual training of CD4 and virtual training development of CD5.  
Contract award date reflects when the first incremental funding is expected to be obligated in the Fiscal Year.

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Systems Test and Evaluation	Various	CACI; ATEC; CTSF : APG, MD; Ft. Hood TX	-	-		1.013	Dec 2022	0.993	Nov 2023	-		0.993	Continuing	Continuing	-
<b>Subtotal</b>			-	-		1.013		0.993		-		0.993	Continuing	Continuing	N/A

**Remarks**  
Funding remains relatively constant from FY 2023 to FY 2024.  
Contract award date reflects when the first incremental funding is expected to be obligated in the Fiscal Year.

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	-	-	6.427	6.005	-	6.005	Continuing	Continuing	N/A

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Army</b>		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> XU3 / <i>Tactical DCO-I</i>

Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028							
	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				
Testing - CD 3					Testing - CD 3																											
Delivery of CD 3									▲ 1 Delivery - CD3																							
Development/Integration/Fixes - CR 1									Dev/Int./Fix - CR 1																							
Testing - CR 1									Testing - CR 1																							
Delivery of CR 1													▲ 2 Delivery - CR 1																			
Development/Integration/Fixes - CR 2													Dev/Int./Fix - CR 2																			
Testing - CR 2													Testing - CR 2																			
Delivery of CR 2																	▲ 3 Delivery - CR 2															
Development/Integration/Fixes - CR 3																	Dev/Int./Fix - CR 3															
Testing - CR 3																	Testing - CR 3															
Delivery of CR 3																					▲ 4 Delivery - CR 3											
Development/Integration/Fixes - CR 4																									Dev/Int./Fix - CR 4							
Testing - CR 4																													Testing - CR 4			

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Army</b>		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> XU3 / <i>Tactical DCO-I</i>

Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				
	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	
Delivery of CR 4																									5				
Development/Integration/Fixes - CR 5																													

5  
Delivery - CR 4  
  
Dev/Int./Fix - CR 5

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605041A / <i>Defensive CYBER Tool Development</i>	<b>Project (Number/Name)</b> XU3 / <i>Tactical DCO-I</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Testing - CD 3	1	2023	2	2023
Delivery of CD 3	3	2023	3	2023
Development/Integration/Fixes - CR 1	3	2023	3	2024
Testing - CR 1	4	2023	3	2024
Delivery of CR 1	4	2024	4	2024
Development/Integration/Fixes - CR 2	3	2024	3	2025
Testing - CR 2	4	2024	3	2025
Delivery of CR 2	4	2025	4	2025
Development/Integration/Fixes - CR 3	4	2025	4	2026
Testing - CR 3	1	2026	4	2026
Delivery of CR 3	4	2026	4	2026
Development/Integration/Fixes - CR 4	1	2027	4	2027
Testing - CR 4	2	2027	4	2027
Delivery of CR 4	4	2027	4	2027
Development/Integration/Fixes - CR 5	1	2028	4	2028

**Note**

Beginning in FY2023, TDI funding transitioned from 0608041A CD 1 Defensive Cyber- Software Prototype Development (BA-8 Software Pilot Program) to a new project code XU3 (Tactical DCO-I) within PE 0605041A Defensive CYBER Tool Development. TDI is funded with RDT&E only for development, engineering, testing, training development, and program management. TDI did not provide an opportunity for the BA-8 Software Pilot Program to assess the alignment of multiple appropriations into a single appropriation.

TDI will be hosted on the Tactical Server Infrastructure (TSI) and will be fielded by the Command Post Computing Environment/Tactical Services Infrastructure (CPCE/TSI) program in accordance with the Army fielding schedule. TDI delivery is defined as when TDI provides the capability to CPCE/TSI to begin fielding.