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**Department of Defense  
Fiscal Year (FY) 2023 Budget Estimates**

April 2022



**Army**

*Justification Book Volume 3c of 3*

***Research, Development, Test & Evaluation, Army***

**RDT&E – Volume III, Budget Activity 8**

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Army • Budget Estimates FY 2023 • RDT&E Program

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**RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY**  
**APPROPRIATION LANGUAGE**

For expenses necessary for basic and applied scientific research, development, test and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, \$13,703,609,000.00 to remain available for obligation until September 30, 2024.

The FY 2023 Overseas Operations accounted for in the base budget are as follows:

Combat or direct combat support expenses that discontinue once combat operations end at major contingency location \$12,800,000.

In-theater and in-CONUS expenses that remain after combat operations cease and have been previously funded in OCO \$5,875,000.

**COST STATEMENT**

The following Justification Books were prepared at a cost of \$474,495.00: Aircraft (ACFT), Missiles (MSLS), Weapons & Tracked Combat Vehicles (WTCV), Ammunition (AMMO), Other Procurement Army (OPA) 1 – Tactical & Support Vehicles, Other Procurement Army (OPA) 2 – Communications & Electronics, Other Procurement Army (OPA) 3 & 4 - Other Support Equipment & Spares, Research, Development, Test and Evaluation (RDTE) for: Budget Activity 1, Budget Activity 2, Budget Activity 3, Budget Activity 4, Budget Activity 5A, Budget Activity 5B, Budget Activity 5C, Budget Activity 5D, Budget Activity 6, Budget Activity 7, and Budget Activity 8.

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**FY 2023 RDT&E, ARMY PROGRAM ELEMENT DESCRIPTIVE SUMMARIES**  
**Introduction and Explanation of Contents**

1. **General.** The purpose of this document is to provide summary information concerning the Research, Development, Test and Evaluation, Army program. The descriptive summaries are comprised of R-2 (Army RDT&E Budget Item Justification – program element level), R-2A (Army RDT&E Budget Item Justification – project level), R-3 (Army RDT&E Cost Analysis), R-4 (Schedule Profile Detail) and R-5 (Termination Liability Funding for MDAPs) Exhibits, which provide narrative information on all RDT&E program elements and projects through FY 2022.
2. **Relationship of the FY 2023 Budget Submitted to Congress to the FY 2022 Budget Submitted to Congress.** This paragraph provides a list of program elements/projects that are major new starts, restructures, developmental transitions, and terminated programs. Explanations for these changes can be found in the narrative sections of the Program Element R-2A Exhibits.

**New Start Programs:**

<b><u>Budget Activity</u></b>	<b><u>OSDPE / Project</u></b>	<b><u>Project Title</u></b>
02	0602002A / DC4	Army Applied Innovation
02	0602002A / DC5	Team Ignite
02	0602141A / CII	Advanced Armaments Lethality Technology
02	0602141A / CZ9	Foundational Hypersonic Weapons Research
02	0602144A / CV3	Engineer Enablers Maneuver, LOG, & Sustainment Apl
02	0602144A / DA1	SAFR Alternatives for Readiness Applied Research
02	0602145A / CU5	Platform Agnostic Armaments Applied Technology
02	0602146A / CU6	Adaptive Information Mediation and Analytics
02	0602146A / CV4	Pathfinder 3D Applied Technology
02	0602150A / CV7	High Energy Laser Direct Diode Apl Tech
02	0602150A / CV8	Vulnerability Modules for Multi-Domain Operations
02	0602150A / DA9	Radar Survivability through Dis Sensing Tech
02	0602180A / DA5	AI Enabled Talent Management Applied Research
02	0602180A / DA6	AI-Enabled Command and Coordination Apl Research
02	0602183A / CU7	Control & Autonomy for Tactical Superiority Tech
02	0602183A / CU8	Structures Tech for Enduring Efficient Resilience

02	0602183A / CU9	Systems Design Technology
02	0602184A / CV9	Technical-SAVVY Soldier Applied Research
03	0603025A / DA3	Army Advanced Innovation
03	0603040A / CN6	Predictive Maintenance Advanced Technology
03	0603040A / DA7	AI-Enabled Command and Coordination Adv Tech
03	0603041A / DA4	All Domain Convergence Engineering & Architectures
03	0603043A / CV1	Control & Autonomy for Tactical Superiority Adv
03	0603043A / CV2	Structures Platform Int Resilience & Efficiency
03	0603119A / CV5	Engineer Enablers Maneuver, LOG, & Sustainment Adv
03	0603119A / DA2	SAFR Alternatives for Readiness Advanced Tech
03	0603466A / CV6	Optimized High Energy Laser Source Adv Tech
03	0603466A / DB3	Radar Survivability through Dis Sensing Adv Tech
04	0604020A / DC8	Army Experimentation and Prototyping
05	0604641A / CF5	Robotic Combat Vehicle (BA5) NGCV-CFT
05	0604827A / S65	Platoon Power Generator
05	0604854A / 516	Paladin/FAASV
06	0605235A / CQ4	Mid-Range Capability

**Program Element/Project Restructures:**

<b><u>Budget Activity</u></b>	<b><u>Old OSDPE / Project: Title</u></b>	<b><u>New OSDPE / Project</u></b>
02	0602143A / BE6: Reactive/Resp Surfaces & Matls-Soldiers & Sys	0602184A / CW9
02	0602146A / AΘ2: Stand-In Advanced RF Effects (STARE)	0602146A / AP5
02	0602146A / AR3: Intelligent Environmental Battlefield Awareness	0602182A / CX3
02	0602146A / AR7: Sensing in Contested Environments Technology	0602182A / CX5
02	0602146A / AR9: Persistent Geophysical Sensing-Infrasound Tech	0602182A / CX4
02	0602146A / AT2: Subterranean Detection and Monitoring Technology	0602182A / CX6
02	0602146A / AV7: Atmospheric Modeling and Meterological Technology	0602182A / CW2
02	0602146A / CK1: Assured PNT Enabling Technologies	0602182A / CZ6
02	0602148A / AI9: Future UAS Engine Technology	0602183A / CW6

02	0602148A / AJ2: Next Generation Rotorcraft Transmission Technology	0602183A / CW8
02	0602148A / AJ6: Advanced Rotors Technology	0602183A / CW3
02	0602148A / AJ8: Experimental and Computational Aeromechanics Techn	0602183A / CW5
02	0602148A / AL2: High Performance Computing for Rotorcraft App Tech	0602183A / DC2
02	0602148A / AL4: High Speed and Efficient VTOL Vehicle Technology	0602183A / CW7
02	0602148A / AL5: Air Vehicle Structures and Dynamics Technology	0602183A / CW4
02	0602148A / AL8: Holistic Situational Awareness and Dec Making Tech	0602141A / CG4
02	0602150A / AD2: High Energy Laser (HEL) Enabling and Support Techn	0602150A / DC1
02	0602150A / AD3: Maneuver Air Defense Technology	0603466A / AD4
02	0602182A / CM9: Convergent CEMA Deception	0602182A / CZ7
03	0602145A / BJ9: Autonomous Mobility Tech	0603462A / BK1
03	0602146A / AM8: Protected SATCOM Technology	0603463A / AM9
03	0602148A / AK4: Multi-Role Small Guided Missile Technology	0603465A / AK5
03	0603463A / AR4: Intelligent Env Battlefield Awareness Adv Tech	0603042A / CX7
03	0603463A / AS9: Persistent Geophysical Sensing-Infrasound Adv Tech	0603042A / CX8
03	0603463A / AR8: Sensing in Contested Environments Adv Technology	0603042A / CX9
03	0603463A / AT3: Subterranean Detection and Monitoring Adv Technology	0603042A / CZ5
03	0603465A / AJ7: Advanced Rotors Advanced Technology	0603043A / CX1
03	0603043A / AJ3: Next Generation Rotorcraft Transmission Adv Technology	0603043A / CX2
03	0603043A / AL3: HPC for Rotorcraft Applications Adv Tech	0603043A / DC3
03	0603463A / AU2: Optimization of Geospatial Data for Visualization	0603463A / AT8
03	0603463A / AV1: GEOInt/Ops Logistics Integration-Planning Adv Tech	0603463A / AU4
03	0602147A / AF1: Long Range Maneuverable Fires (LRMF) Technology	0603464A / AF2
03	0603464A / AE8: Land-Based Anti-Ship Missile (LBASM) Advanced Tech	0603464A / CZ8
03	0603465A / CH6: Adapt & Resilnt Tach Autnmy Cont&Struct Adv Tech	0603043A / CV1
03	0603465A / CH6: Adapt & Resilnt Tach Autnmy Cont&Struct Adv Tech	0603043A / CV2
03	0603465A / CH8: UAS Survivability Advance Technology	0603465A / AK3
03	0603465A / CH8: UAS Survivability Advance Technology	0603465A / CG1
03	0602148A / BZ7: Future Vertical Lift Medical Technologies	0603465A / CJ5
04	0603466A / AD1: High Energy Laser Tactical Vehicle Demo Adv Tech	0604019A / BU9
04	0305251A / FA8: Cyberspace Operations Forces and Force Support	0305251A / DD3
04	0603801A / B47: Future Vertical Lift	0603801A / CS7
04	0604117A / FI4: Maneuver - Short Range Air Defense (M-SHORAD)	0604117A / CR9
04	0605054A / FI3: Rapid Capability Development and Maturation	0604117A / CR9
04	0604117A / FI4: Maneuver - Short Range Air Defense (M-SHORAD)	0604117A / CS1



04	0604644A / MR1: Mobile Intermediate Range Missile	0604135A / MR2
04	0604644A / MR1: Mobile Intermediate Range Missile	0604135A / MR3
04	0604644A / MR1: Mobile Intermediate Range Missile	0604135A / MR4
04	0604182A / HX1: Long Range Hypersonic Weapon	0604182A / HX3
04	0604182A / HX1: Long Range Hypersonic Weapon	0604182A / HX4
04	0604182A / HX1: Long Range Hypersonic Weapon	0604182A / HX5
04	0604182A / HX1: Long Range Hypersonic Weapon	0604182A / HX6
05	0604818A / EJ5: Mounted Computing Environment (MCE)	0604805A / 593
05	0605013A / T05: Army Business System Modernization Initiatives	0605013A / BY3
05	0608041A / CD1: Defensive Cyber - Software Prototype Devel	0605041A / XU3
05	0605042A / FA1: Manpack Radio	0605236A / CQ1
05	0605042A / FA2: Rifleman Radio (RR)	0605236A / CQ1
06	0605602A / 628: Developmental Test Technology & Sustainment	0605602A / FJ3
06	0605602A / 62C: Modeling and Simulation Instrumentation	0605602A / FJ3
07	0303142A / 456: MILSATCOM System Engineering	0303142A / CO7
07	0205778A / EG2: GMLRS Alternative Warheads	0205778A / EG3

**Program Terminations (including transfers to Procurement and Sustainment):**

<u><b>Budget Activity</b></u>	<u><b>OSDPE / Project</b></u>	<u><b>Project Title</b></u>
01	0601104A / CI9	University & Industry Rsch Ctrs / Strategic University Basic Research Alliance
02	0602141A / CJ6	Lethality Technology / Advanced Energetics for Missile Technologies
02	0602143A / BB9	Soldier Lethality Technology / Human Performance Tech for Mobility & Lethality
02	0602144A / CG5	Ground Technology / Ground Vehicle Sensor Concepts and Technologies
02	0602146A / AR1	Network C3I Technology / Robust, Resilient and Intelligent C3I Technology
02	0602150A / AD5	Air and Missile Defense Technology / Next Generation Fires Radar Technology
03	0603002A / MN3	Medical Advanced Technology / Immediate Cardiopulmonary Stabilization Adv Tech
03	0603002A / MN4	Medical Advanced Technology / Advanced Life Support Advanced Technology
03	0603002A / MN5	Medical Advanced Technology / Next Generation Blood Products Advanced Technology
03	0603002A / MN9	Medical Advanced Technology / Far Forward Behavioral Health Care Advanced Tech

03	0603463A / AN2	Network C3I Advanced Technology / Narrowband SATCOM Advanced Technology
03	0603466A / AD4	Air and Missile Defense Adv Technology / Maneuver Air Defense Advanced Technology
04	0604785A / DS4	Integrated Base Defense / Integrated Base Defense
05	0604854A / HB6	Artillery Systems EMD / Mobile 155MM Howitzer

3. **Classification:** This document contains no classified data. Appropriately cleared individuals can obtain further information on Classified/Special Access Programs by contacting the Department of the Army.

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Department of the Army  
FY 2023 President's Budget  
Exhibit R-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

Apr 2022

<u>Summary Recap of Budget Activities</u>	<u>FY 2021 (Base + OCO)</u>	<u>FY 2022 Enactment</u>	<u>FY 2023 Request</u>
Basic Research	552,521	606,509	466,823
Applied Research	1,518,220	1,529,888	883,759
Advanced Technology Development	1,948,792	2,190,430	1,392,065
Advanced Component Development & Prototypes	3,589,313	3,818,276	4,098,749
System Development & Demonstration	2,979,946	3,254,230	4,031,334
Management Support	1,832,049	1,553,905	1,554,252
Operational Systems Development	1,719,691	1,466,180	1,188,403
Software and Digital Technology Pilot Programs	56,706	108,841	94,888
<b>Total Research, Development, Test &amp; Evaluation</b>	<b>14,197,238</b>	<b>14,528,259</b>	<b>13,710,273</b>
<u>Summary Recap of FYDP Programs</u>			
General Purpose Forces	589,523	579,473	392,489
Intelligence and Communications	372,869	275,873	210,597
Research and Development	13,099,825	13,566,200	13,009,253
Central Supply and Maintenance	130,785	103,720	91,270
Administration and Associated Activities	253		
Classified Programs	3,983	2,993	6,664
<b>Total Research, Development, Test &amp; Evaluation</b>	<b>14,197,238</b>	<b>14,528,259</b>	<b>13,710,273</b>

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Department of the Army  
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## Appropriation: 2040A Research, Development, Test &amp; Eval, Army

Line No	Program Element Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	S e c
1	0601102A	Defense Research Sciences	01	344,031	368,751	279,328	U
2	0601103A	University Research Initiatives	01	84,697	91,241	70,775	U
3	0601104A	University and Industry Research Centers	01	118,716	126,267	100,909	U
4	0601121A	Cyber Collaborative Research Alliance	01	5,077	5,067	5,355	U
5	0601601A	Artificial Intelligence and Machine Learning Basic Research	01		15,183	10,456	U
		<b>Basic Research</b>		<b>552,521</b>	<b>606,509</b>	<b>466,823</b>	
6	0602002A	Army Agile Innovation and Development-Applied Research	02			9,534	U
7	0602115A	Biomedical Technology	02	11,403	11,925		U
8	0602134A	Counter Improvised-Threat Advanced Studies	02	1,927	1,976	6,192	U
9	0602141A	Lethality Technology	02	117,484	91,626	87,717	U
10	0602142A	Army Applied Research	02	29,257	28,654	27,833	U
11	0602143A	Soldier Lethality Technology	02	201,511	205,058	103,839	U
12	0602144A	Ground Technology	02	159,358	216,550	52,848	U
13	0602145A	Next Generation Combat Vehicle Technology	02	258,341	245,525	174,090	U
14	0602146A	Network C3I Technology	02	202,256	164,804	64,115	U
15	0602147A	Long Range Precision Fires Technology	02	119,007	93,785	43,029	U
16	0602148A	Future Verticle Lift Technology	02	169,536	133,158	69,348	U
17	0602150A	Air and Missile Defense Technology	02	107,584	93,549	27,016	U
18	0602180A	Artificial Intelligence and Machine Learning Technologies	02		15,034	16,454	U
19	0602181A	All Domain Convergence Applied Research	02		25,967	27,399	U
20	0602182A	C3I Applied Research	02		12,406	27,892	U
21	0602183A	Air Platform Applied Research	02		6,597	41,588	U

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## Appropriation: 2040A Research, Development, Test &amp; Eval, Army

Line	Program Element	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	S e c
No	Number						
22	0602184A	Soldier Applied Research	02		11,064	15,716	U
23	0602213A	C3I Applied Cyber	02	18,816	12,119	13,605	U
24	0602386A	Biotechnology for Materials - Applied Research	02		20,643	21,919	U
25	0602785A	Manpower/Personnel/Training Technology	02	20,399	18,701	19,649	U
26	0602787A	Medical Technology	02	101,341	120,747	33,976	U
		<b>Applied Research</b>		<b>1,518,220</b>	<b>1,529,888</b>	<b>883,759</b>	
27	0603002A	Medical Advanced Technology	03	95,146	137,804	5,207	U
28	0603007A	Manpower, Personnel and Training Advanced Technology	03	11,344	14,273	15,598	U
29	0603025A	Army Agile Innovation and Demonstration	03		22,231	20,900	U
30	0603040A	Artificial Intelligence and Machine Learning Advanced Technologies	03		909	6,395	U
31	0603041A	All Domain Convergence Advanced Technology	03		17,743	45,463	U
32	0603042A	C3I Advanced Technology	03		3,151	12,716	U
33	0603043A	Air Platform Advanced Technology	03		754	17,946	U
34	0603044A	Soldier Advanced Technology	03		890	479	U
35	0603115A	Medical Development	03	26,711	26,508		U
36	0603116A	Lethality Advanced Technology	03		8,066	9,796	U
37	0603117A	Army Advanced Technology Development	03	64,163	76,815	134,874	U
38	0603118A	Soldier Lethality Advanced Technology	03	154,161	152,369	100,935	U
39	0603119A	Ground Advanced Technology	03	196,055	280,490	32,546	U
40	0603134A	Counter Improvised-Threat Simulation	03	24,087	24,747	21,486	U
41	0603386A	Biotechnology for Materials - Advanced Research	03		53,736	56,853	U
42	0603457A	C3I Cyber Advanced Development	03	43,357	61,426	41,354	U

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## Appropriation: 2040A Research, Development, Test &amp; Eval, Army

Line	Program Element	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	S e c
No	Number						
43	0603461A	High Performance Computing Modernization Program	03	221,161	229,123	251,964	U
44	0603462A	Next Generation Combat Vehicle Advanced Technology	03	309,860	299,712	193,242	U
45	0603463A	Network C3I Advanced Technology	03	215,337	211,068	125,565	U
46	0603464A	Long Range Precision Fires Advanced Technology	03	177,142	141,909	100,830	U
47	0603465A	Future Vertical Lift Advanced Technology	03	220,334	261,880	177,836	U
48	0603466A	Air and Missile Defense Advanced Technology	03	173,244	145,826	11,147	U
49	0603920A	Humanitarian Demining	03	16,690	19,000	8,933	U
		<b>Advanced Technology Development</b>		<b>1,948,792</b>	<b>2,190,430</b>	<b>1,392,065</b>	
50	0603305A	Army Missile Defense Systems Integration	04	139,518	56,702	12,001	U
51	0603308A	Army Space Systems Integration	04	25,584	25,755	17,945	U
52	0603327A	Air and Missile Defense Systems Engineering	04	47,098	15,000		U
53	0603619A	Landmine Warfare and Barrier - Adv Dev	04	56,067	46,637	64,001	U
54	0603639A	Tank and Medium Caliber Ammunition	04	106,881	73,844	64,669	U
55	0603645A	Armored System Modernization - Adv Dev	04	130,485	164,328	49,944	U
56	0603747A	Soldier Support and Survivability	04	5,312	2,897	4,060	U
57	0603766A	Tactical Electronic Surveillance System - Adv Dev	04	182,400	113,365	72,314	U
58	0603774A	Night Vision Systems Advanced Development	04	15,179	62,820	18,048	U
59	0603779A	Environmental Quality Technology - Dem/Val	04	20,906	22,921	31,249	U
60	0603790A	NATO Research and Development	04	4,589	3,777	3,805	U
61	0603801A	Aviation - Adv Dev	04	694,296	1,178,460	1,162,344	U
62	0603804A	Logistics and Engineer Equipment - Adv Dev	04	15,287	11,055	9,638	U
63	0603807A	Medical Systems - Adv Dev	04	36,006	37,053	598	U

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## Appropriation: 2040A Research, Development, Test &amp; Eval, Army

Line	Program Element	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	S e c
No	Number						
64	0603827A	Soldier Systems - Advanced Development	04	23,905	25,925	25,971	U
65	0604017A	Robotics Development	04	92,401	80,525	26,594	U
66	0604019A	Expanded Mission Area Missile (EMAM)	04		27,872	220,820	U
67	0604020A	Cross Functional Team (CFT) Advanced Development & Prototyping	04			106,000	U
68	0604021A	Electronic Warfare Technology Maturation (MIP)	04	15,034			U
69	0604035A	Low Earth Orbit (LEO) Satellite Capability	04	21,850	19,638	35,509	U
70	0604036A	Multi-Domain Sensing System (MDSS) Adv Dev	04		50,548	49,932	U
71	0604037A	Tactical Intel Targeting Access Node (TITAN) Adv Dev	04		28,347	863	U
72	0604100A	Analysis Of Alternatives	04	9,714	10,091	10,659	U
73	0604101A	Small Unmanned Aerial Vehicle (SUAV) (6.4)	04	1,328	926	1,425	U
74	0604113A	Future Tactical Unmanned Aircraft System (FTUAS)	04	59,183	76,349	95,719	U
75	0604114A	Lower Tier Air Missile Defense (LTAMD) Sensor	04	308,805	297,629	382,147	U
76	0604115A	Technology Maturation Initiatives	04	141,109	132,561	269,756	U
77	0604117A	Maneuver - Short Range Air Defense (M-SHORAD)	04	5,776	39,376	225,147	U
78	0604119A	Army Advanced Component Development & Prototyping	04	167,990	189,483	198,111	U
79	0604120A	Assured Positioning, Navigation and Timing (PNT)	04	115,688	83,952	43,797	U
80	0604121A	Synthetic Training Environment Refinement & Prototyping	04	112,093	206,335	166,452	U
81	0604134A	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04	13,326	13,379	15,840	U
82	0604135A	Strategic Mid-Range Fires	04			404,291	U
83	0604182A	Hypersonics	04	841,666	315,131	173,168	U
84	0604403A	Future Interceptor	04		6,895	8,179	U
85	0604531A	Counter - Small Unmanned Aircraft Systems Advanced Development	04		19,148	35,110	U

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## Appropriation: 2040A Research, Development, Test &amp; Eval, Army

Line	Program Element	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	S e c
No	Number						
86	0604541A	Unified Network Transport	04	39,192	35,172	36,966	U
87	0604644A	Mobile Medium Range Missile	04	88,100	286,445		U
88	0604785A	Integrated Base Defense (Budget Activity 4)	04	2,020	2,040		U
89	0305251A	Cyberspace Operations Forces and Force Support	04	50,525	55,895	55,677	U
		<b>Advanced Component Development &amp; Prototypes</b>		<b>3,589,313</b>	<b>3,818,276</b>	<b>4,098,749</b>	
90	0604201A	Aircraft Avionics	05	7,011	6,654	3,335	U
91	0604270A	Electronic Warfare Development	05	56,624	30,840	4,243	U
92	0604601A	Infantry Support Weapons	05	89,497	79,339	66,529	U
93	0604604A	Medium Tactical Vehicles	05	8,213	9,524	22,163	U
94	0604611A	JAVELIN	05	5,983	7,094	7,870	U
95	0604622A	Family of Heavy Tactical Vehicles	05	22,254	28,445	50,924	U
96	0604633A	Air Traffic Control	05	3,383	4,405	2,623	U
97	0604641A	Tactical Unmanned Ground Vehicle (TUGV)	05			115,986	U
98	0604642A	Light Tactical Wheeled Vehicles	05	4,371	2,055		U
99	0604645A	Armored Systems Modernization (ASM) - Eng Dev	05	123,992	122,778	71,287	U
100	0604710A	Night Vision Systems - Eng Dev	05	52,959	43,417	62,679	U
101	0604713A	Combat Feeding, Clothing, and Equipment	05	2,734	1,658	1,566	U
102	0604715A	Non-System Training Devices - Eng Dev	05	27,013	26,514	18,600	U
103	0604741A	Air Defense Command, Control and Intelligence - Eng Dev	05	62,058	59,518	39,541	U
104	0604742A	Constructive Simulation Systems Development	05	9,779	22,240	29,570	U
105	0604746A	Automatic Test Equipment Development	05	5,375	8,807	5,178	U
106	0604760A	Distributive Interactive Simulations (DIS) - Eng Dev	05	7,605	12,453	8,189	U

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Line	Program Element	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	S e c
No	Number						
107	0604768A	Brilliant Anti-Armor Submunition (BAT)	05	20,175			U
108	0604780A	Combined Arms Tactical Trainer (CATT) Core	05	3,438			U
109	0604798A	Brigade Analysis, Integration and Evaluation	05	18,737	21,423	21,228	U
110	0604802A	Weapons and Munitions - Eng Dev	05	277,344	297,086	263,778	U
111	0604804A	Logistics and Engineer Equipment - Eng Dev	05	53,676	54,642	41,669	U
112	0604805A	Command, Control, Communications Systems - Eng Dev	05	10,674	20,107	40,038	U
113	0604807A	Medical Materiel/Medical Biological Defense Equipment - Eng Dev	05	48,285	44,400	5,513	U
114	0604808A	Landmine Warfare/Barrier - Eng Dev	05	9,239	29,137	12,150	U
115	0604818A	Army Tactical Command & Control Hardware & Software	05	126,676	155,017	111,690	U
116	0604820A	Radar Development	05	105,271	122,607	71,259	U
117	0604822A	General Fund Enterprise Business System (GFEBS)	05	15,428	15,979	10,402	U
118	0604823A	Firefinder	05	18,278			U
119	0604827A	Soldier Systems - Warrior Dem/Val	05	6,546	6,454	11,425	U
120	0604852A	Suite of Survivability Enhancement Systems - EMD	05	62,012	96,132	109,702	U
121	0604854A	Artillery Systems - EMD	05	36,187	25,000	23,106	U
122	0605013A	Information Technology Development	05	123,659	129,380	124,475	U
123	0605018A	Integrated Personnel and Pay System-Army (IPPS-A)	05	111,078	67,701	67,564	U
124	0605028A	Armored Multi-Purpose Vehicle (AMPV)	05	76,140	35,560		U
125	0605030A	Joint Tactical Network Center (JTNC)	05	15,671	16,350	17,950	U
126	0605031A	Joint Tactical Network (JTN)	05	30,540	28,905	30,169	U
127	0605033A	Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E)	05	5,758			U
128	0605035A	Common Infrared Countermeasures (CIRCM)	05	29,770	16,630	11,523	U

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Line	Program Element	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	S e c
No	Number						
129	0605038A	Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV) Sensor Suite	05	4,669	7,618		U
130	0605041A	Defensive CYBER Tool Development	05	28,544	18,811	33,029	U
131	0605042A	Tactical Network Radio Systems (Low-Tier)	05	20,511	28,741	4,497	U
132	0605047A	Contract Writing System	05	22,025	20,960	23,487	U
133	0605051A	Aircraft Survivability Development	05	99,403	61,768	19,123	U
134	0605052A	Indirect Fire Protection Capability Inc 2 - Block 1	05	152,399	182,257	131,093	U
135	0605053A	Ground Robotics	05	12,010	16,360	26,809	U
136	0605054A	Emerging Technology Initiatives	05	294,366	226,802	185,311	U
137	0605143A	Biometrics Enabling Capability (BEC)	05		4,326	11,091	U
138	0605144A	Next Generation Load Device - Medium	05		15,397	22,439	U
139	0605145A	Medical Products and Support Systems Development	05	919	962		U
140	0605148A	Tactical Intel Targeting Access Node (TITAN) EMD	05		54,972	58,087	U
141	0605203A	Army System Development & Demonstration	05	177,501	122,175	119,516	U
142	0605205A	Small Unmanned Aerial Vehicle (SUAV) (6.5)	05	5,780	2,275	6,530	U
143	0605224A	Multi-Domain Intelligence	05		9,313	19,911	U
144	0605225A	SIO Capability Development	05		22,713		U
145	0605231A	Precision Strike Missile (PrSM)	05		188,452	259,506	U
146	0605232A	Hypersonics EMD	05		111,473	633,499	U
147	0605233A	Accessions Information Environment (AIE)	05		16,790	13,647	U
148	0605235A	Strategic Mid-Range Capability	05			5,016	U
149	0605236A	Integrated Tactical Communications	05			12,447	U
150	0605450A	Joint Air-to-Ground Missile (JAGM)	05	7,566	2,134	2,366	U

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Line	Program Element	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	S e c
No	Number						
151	0605457A	Army Integrated Air and Missile Defense (AIAMD)	05	213,956	159,873	265,288	U
152	0605531A	Counter - Small Unmanned Aircraft Systems Sys Dev & Demonstration	05		33,386	14,892	U
153	0605625A	Manned Ground Vehicle	05	162,390	202,320	589,762	U
154	0605766A	National Capabilities Integration (MIP)	05	7,670	13,454	17,030	U
155	0605812A	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Ph	05	1,500	2,564	9,376	U
156	0605830A	Aviation Ground Support Equipment	05	1,413	1,201	2,959	U
157	0303032A	TROJAN - RH12	05	3,451	3,362	3,761	U
158	0303667A	Citizen Broadband Radio System	05	900			U
159	0303767A	AMBIT - Pre-Auctioned SRF	05	9,785			U
160	0304270A	Electronic Warfare Development	05	59,755	75,520	56,938	U
		<b>System Development &amp; Demonstration</b>		<b>2,979,946</b>	<b>3,254,230</b>	<b>4,031,334</b>	
161	0604256A	Threat Simulator Development	06	41,487	61,422	18,437	U
162	0604258A	Target Systems Development	06	35,279	42,404	19,132	U
163	0604759A	Major T&E Investment	06	119,231	93,617	107,706	U
164	0605103A	Rand Arroyo Center	06	12,989	32,296	35,542	U
165	0605301A	Army Kwajalein Atoll	06	221,949	240,877	309,005	U
166	0605326A	Concepts Experimentation Program	06	46,847	79,585	87,122	U
167	0605502A	Small Business Innovative Research	06	369,715			U
168	0605601A	Army Test Ranges and Facilities	06	390,366	367,125	401,643	U
169	0605602A	Army Technical Test Instrumentation and Targets	06	81,829	59,253	37,962	U
170	0605604A	Survivability/Lethality Analysis	06	36,001	36,370	36,500	U
171	0605606A	Aircraft Certification	06	2,736	2,489	2,777	U

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Line	Program Element No	Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	S e c
172	0605702A		Meteorological Support to RDT&E Activities	06	6,360	6,521	6,958	U
173	0605706A		Materiel Systems Analysis	06	21,830	21,558	22,037	U
174	0605709A		Exploitation of Foreign Items	06	8,936	13,631	6,186	U
175	0605712A		Support of Operational Testing	06	54,116	55,122	70,718	U
176	0605716A		Army Evaluation Center	06	56,827	65,854	67,058	U
177	0605718A		Army Modeling & Sim X-Cmd Collaboration & Integ	06	2,478	2,633	6,097	U
178	0605801A		Programwide Activities	06	89,023	96,558	89,793	U
179	0605803A		Technical Information Activities	06	25,817	31,987	28,752	U
180	0605805A		Munitions Standardization, Effectiveness and Safety	06	50,648	63,042	48,316	U
181	0605857A		Environmental Quality Technology Mgmt Support	06	1,715	1,789	1,912	U
182	0605898A		Army Direct Report Headquarters - R&D - MHA	06	50,859	48,981	53,271	U
183	0606002A		Ronald Reagan Ballistic Missile Defense Test Site	06	74,089	80,921	90,088	U
184	0606003A		CounterIntel and Human Intel Modernization	06	5,200	5,363	1,424	U
185	0606105A		Medical Program-Wide Activities	06	18,973	39,041		U
186	0606942A		Assessments and Evaluations Cyber Vulnerabilities	06	6,496	5,466	5,816	U
187	0909999A		Financing for Cancelled Account Adjustments	06	253			U
			<b>Management Support</b>		<b>1,832,049</b>	<b>1,553,905</b>	<b>1,554,252</b>	
188	0603778A		MLRS Product Improvement Program	07	9,785	12,314	18,463	U
189	0605024A		Anti-Tamper Technology Support	07	8,436	8,868	9,284	U
190	0607131A		Weapons and Munitions Product Improvement Programs	07	24,666	35,828	11,674	U
191	0607134A		Long Range Precision Fires (LRPF)	07	100,146			U
192	0607136A		Blackhawk Product Improvement Program	07	8,300	14,773		U

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193	0607137A		Chinook Product Improvement Program	07	49,409	67,872	52,513	U
194	0607139A		Improved Turbine Engine Program	07	232,159	260,024	228,036	U
195	0607142A		Aviation Rocket System Product Improvement and Development	07	11,321	12,417	11,312	U
196	0607143A		Unmanned Aircraft System Universal Products	07	19,460	4,594	512	U
197	0607145A		Apache Future Development	07	52,502	10,067	10,074	U
198	0607148A		AN/TPQ-53 Counterfire Target Acquisition Radar System	07		47,752	62,559	U
199	0607150A		Intel Cyber Development	07	14,652	3,611	13,343	U
200	0607312A		Army Operational Systems Development	07	35,851	28,029	26,131	U
201	0607313A		Electronic Warfare Development	07		5,673	6,432	U
202	0607665A		Family of Biometrics	07	1,276	1,144	1,114	U
203	0607865A		Patriot Product Improvement	07	178,984	125,932	152,312	U
204	0203728A		Joint Automated Deep Operation Coordination System (JADOCS)	07	43,060	25,489	19,329	U
205	0203735A		Combat Vehicle Improvement Programs	07	213,726	280,107	192,310	U
206	0203743A		155mm Self-Propelled Howitzer Improvements	07	217,959	175,076	136,680	U
207	0203744A		Aircraft Modifications/Product Improvement Programs	07	11,261	10,000		U
208	0203752A		Aircraft Engine Component Improvement Program	07	80	132	148	U
209	0203758A		Digitization	07	4,351	3,903	2,100	U
210	0203801A		Missile/Air Defense Product Improvement Program	07	1,241	127	3,109	U
211	0203802A		Other Missile Product Improvement Programs	07	15,268	10,265	9,027	U
212	0205412A		Environmental Quality Technology - Operational System Dev	07	250	262	793	U
213	0205778A		Guided Multiple-Launch Rocket System (GMLRS)	07	72,817	60,733	20,180	U
214	0208053A		Joint Tactical Ground System	07	9,510	13,379	8,813	U

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Line	Program Element No	Number	Item	Act	FY 2021 (Base + OCO)	FY 2022 Enactment	FY 2023 Request	S e c
216	0303028A		Security and Intelligence Activities	07	23,367	24,531		U
217	0303140A		Information Systems Security Program	07	28,270	15,680	17,209	U
218	0303141A		Global Combat Support System	07	70,652	45,297	27,100	U
219	0303142A		SATCOM Ground Environment (SPACE)	07	18,002	15,222	18,321	U
222	0305179A		Integrated Broadcast Service (IBS)	07	382	5,430	9,926	U
223	0305204A		Tactical Unmanned Aerial Vehicles	07	38,151	8,410	4,500	U
224	0305206A		Airborne Reconnaissance Systems	07	28,858	24,460	17,165	U
225	0305208A		Distributed Common Ground/Surface Systems	07	40,771			U
226	0307665A		Biometrics Enabled Intelligence	07		2,066		U
227	0708045A		End Item Industrial Preparedness Activities	07	130,785	103,720	91,270	U
9999	9999999999		Classified Programs		3,983	2,993	6,664	U
			<b>Operational Systems Development</b>		<b>1,719,691</b>	<b>1,466,180</b>	<b>1,188,403</b>	
228	0608041A		Defensive CYBER - Software Prototype Development	08	56,706	108,841	94,888	U
			<b>Software and Digital Technology Pilot Programs</b>		<b>56,706</b>	<b>108,841</b>	<b>94,888</b>	
			<b>Total Research, Development, Test &amp; Eval, Army</b>		<b>14,197,238</b>	<b>14,528,259</b>	<b>13,710,273</b>	

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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army										Date: April 2022		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 8: Software and Digital Technology Pilot Programs					R-1 Program Element (Number/Name) PE 0608041A / Defensive CYBER - Software Prototype Development							
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	-	56.706	108.841	94.888	-	94.888	11.809	6.921	3.949	4.682	0.000	287.796
CD1: Defensive Cyber - Software Prototype Devel	-	56.706	108.841	86.349	-	86.349	11.809	6.921	3.949	4.682	0.000	279.257
DD2: Joint Cyber Warfighting Architecture Software	-	-	-	8.539	-	8.539	-	-	-	-	0.000	8.539

## A. Mission Description and Budget Item Justification

This funding line is a key enabler of the Army Modernization Priorities in support of Defense Cyberspace Operations (DCO). DCO is the only Army program selected for the BA8 Software Pilot Program (PE 0608041A) starting in Fiscal Year (FY) 2021. The program realigned \$39.765 million FY2023 Research, Development, Test and Evaluation (RDTE) from PE 060541A EV5 and \$46.584 million FY2023 Other Procurement Army (OPA) from PE 0128B63000 to BA8 Software Pilot Program PE 0608041A Project Code CD1. FY2023 OPA PE 0128B63000 funding also aligned \$8.539M to BA8 Software Pilot Program PE 0608041A Project Code DD2.

FY2023

The DCO budget line includes funding for Program Executive Office Command Control and Communications - Tactical (PEO C3T) Tactical DCO Infrastructure (TDI); (Legacy) Program Executive Office Enterprise Information Systems (PEO EIS) Defensive Cyber Operations; and Army Cyber Command (ARCYBER) Rapid Cyber Prototyping.

- 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), FORSCOM, (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.

Defensive Cyber Tools and Analytics:

- \* DCO - Cyberspace Analytics - (PEO EIS) - Strategic Level (ACOIC)
- \* DCO - Mission Planning - (PEO EIS) - Strategic Level
- \* DCO - Tools Suite - (PEO EIS) - Garrison/Tactical Level
- \* DCO - User Activity Monitoring - (PEO EIS) - Strategic Level
- \* DCO - Forensics and Malware Analysis - (PEO EIS) - Garrison/Tactical Level
- \* DCO - Threat Emulation - (PEO EIS) - Strategic Level

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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army			Date: April 2022		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 8: Software and Digital Technology Pilot Programs		R-1 Program Element (Number/Name) PE 0608041A I Defensive CYBER - Software Prototype Development			
* DCO - DCO Development Environment (DCODE) - (PEO EIS) * DCO - Counter Infiltration - (PEO EIS) - Garrison/Tactical Level (Funding beginning in FY2023)  - ARCYBER Rapid Cyber Prototyping provides software based capabilities that can quickly respond to emerging cyber threats and keep up with threat technology; while supporting Multi-Domain operations. ARCYBER identifies potential development and prototyping efforts via Cyber Needs Forms (CNFs) based on operational feedback, changes in the operational information environment and/or trends of adversarial activity; which drive CONOP and TTP modifications. These are separate and distinct from DCO programmed efforts already funded or budgeted for by PM DCO and are used to rapidly address a network threat/vulnerability.					
B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	56.706	118.811	0.000	-	0.000
Current President's Budget	56.706	108.841	94.888	-	94.888
Total Adjustments	0.000	-9.970	94.888	-	94.888
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-9.922			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	94.888	-	94.888
• FFRDC Transfer	-	-0.048	-	-	-
Change Summary Explanation					
Fiscal Year 2022 (FY2022) in the amount of \$9.970 million decreased to the Defensive Cyber program, cited from \$6.922 million overestimation of program management costs, \$3.000 million overestimation of DCO Mission Planning costs, and \$48 thousand from FFRDC reduction.					
FY2023 funding increase reflects the fact that the FY2022 President's Budget request did not include out-year funding.					

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army										Date: April 2022		
Appropriation/Budget Activity 2040 / 8					R-1 Program Element (Number/Name) PE 0608041A / <i>Defensive CYBER - Software Prototype Development</i>				Project (Number/Name) CD1 / <i>Defensive Cyber - Software Prototype Devel</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
CD1: <i>Defensive Cyber - Software Prototype Devel</i>	-	56.706	108.841	86.349	-	86.349	11.809	6.921	3.949	4.682	0.000	279.257
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This funding line is a key enabler of the Army Modernization Priorities in support Line of the Army Network Modernization Strategy Line of Effort (LOE) 1, Key Enabler for Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

The Defensive Cyber Operations (DCO) budget line includes funding for Program Executive Office Command Control and Communications - Tactical (PEO C3T) Tactical DCO Infrastructure (TDI) (Legacy); Program Executive Office Enterprise Information Systems (PEO EIS) Defensive Cyber Operations; and Army Cyber Command (ARCYBER) Rapid Cyber Prototyping.

- 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), FORSCOM, (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.

**Defensive Cyber Tools and Analytics:**

- \* DCO - Cyberspace Analytics - (PEO EIS) - Strategic Level (IWOC)
- \* DCO - Mission Planning - (PEO EIS) - Strategic Level
- \* DCO - Tools Suite - (PEO EIS) - Garrison/Tactical Level
- \* DCO - User Activity Monitoring - (PEO EIS) - Strategic Level
- \* DCO - Forensics and Malware Analysis - (PEO EIS) - Garrison/Tactical Level
- \* DCO - Threat Emulation - (PEO EIS) - Strategic Level
- \* DCO - DCO Development Environment (DCODE) - (PEO EIS)
- \* DCO - Counter Infiltration - (PEO EIS) - Garrison/Tactical Level (Funding beginning in FY2023)

- ARCYBER Rapid Cyber Prototyping provides software based capabilities that can quickly respond to emerging cyber threats and keep up with threat technology; while supporting Multi-Domain operations. ARCYBER identifies potential development and prototyping efforts via Cyber Needs Forms (CNFs) based on operational feedback, changes in the operational information environment and/or trends of adversarial activity; which drive CONOP and Tactics Techniques and Procedures (TTP)

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022		
Appropriation/Budget Activity 2040 / 8		R-1 Program Element (Number/Name) PE 0608041A / Defensive CYBER - Software Prototype Development	Project (Number/Name) CD1 / Defensive Cyber - Software Prototype Devel		
modifications. These are separate and distinct from DCO programmed efforts already funded or budgeted for by PM DCO and are used to rapidly address a network threat/vulnerability.					
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2021	FY 2022	FY 2023
Title: Defensive Cyber Operations (DCO) - Tactical DCO Infrastructure (TDI) (PEO C3T)			5.000	5.545	-
Description: TDI is a software only program that pre-configures applications from DCO?s Tool Suite 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 TSI and will reside within the Command Post at echelon Army Service Component Commands (ASCC) through Brigade.					
FY 2022 Plans: FY 2022 RDTE Plans: \$5.545M FY 2022 funding supports development engineering, integration, testing, training development and program management to complete the last capability within the current IT box, CD3. CD3 will integrate the enhanced DCO tool suite that will enable broader data collection and data aggregation from Project Manager Tactical Network (PM TN)'s Endpoint Security and SIEM Platform (ESSP) and the ability for WiFi and 4G Connection. PEO C3T will execute these funds.					
FY 2022 to FY 2023 Increase/Decrease Statement: FY2023 TDI funding transitioned from PE 0608041A Project Code CD 1 Defensive Cyber- Software Prototype Development to PE 0605041A Project Code XU3 Defense Cyber Tool Development (Tactical DCO-I). TDI is solely funded with RDT&E for development, engineering, testing, training development, and program management. TDI, an RDT&E only program, did not provide an opportunity for the BA-8 Software Pilot Program to assess the alignment of multiple appropriations into a single appropriation.					
Title: Defensive Cyber Operations - Cyber Analytics (PEO EIS)			16.127	35.800	20.712
Description: DCO Cyberspace Analytics Big Data Platform (BDP) is a scalable software-based capability hosted in the cloud, called Gabriel Nimbus (GN), which offers interfaces and visualization accessible by cyberspace defenders at all levels to facilitate counter-reconnaissance activities meant to discover the presence of advanced or sophisticated cyber threats and vulnerabilities.					
FY 2022 Plans: FY2022 RDTE Plans: \$12.300M FY2022 funding supports software and modification to BDP/GN to include engineering, integration, cybersecurity, and testing of capability releases (11) through (14) leading to Full Operational Capability (FOC). It is anticipated that Cyber Analytics will achieve FOC in 4QFY2022. Cyber Analytics capability will be installed and operational on designated infrastructure at the regional and local level to ingest, process, and store corresponding data.					

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022		
Appropriation/Budget Activity 2040 / 8	R-1 Program Element (Number/Name) PE 0608041A / Defensive CYBER - Software Prototype Development	Project (Number/Name) CD1 / Defensive Cyber - Software Prototype Devel		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
FY2022 OMA Plans: \$23.500M FY2022 funding supports all hosting costs for (10) PB of NIPR that is needed from a strategic perspective to help prevent possible future cyber attacks, (3) PB of SIPR, and (3) PB of JWICS ((2) PB for Cyber Analytics and (1) PB for User Activity Monitoring). Cloud hosting size must be large enough to efficiently ingest all of the data feeds, and any PB increase will also increase the costs of the management tool and managed professional services. FY2022 funding supports initiation of the Cyberspace Analytics Development Support contract and continuous development of BDP applications and analytics to include the associated engineering, integration, cybersecurity, testing, and training for new capability releases. FY2022 funding also supports software and modification to BDP/GN to include engineering, integration, cybersecurity, and testing of new capability releases leading to Full Operational Capability (FOC). It is anticipated that Cyber Analytics will achieve FOC in 4QFY2022. Cyber Analytics capability will be installed and operational on designated infrastructure at the regional and local level to ingest, process, and store corresponding data. <b>FY 2023 Plans:</b> Prior to BA8 Pilot program, this capability was funded with RDTE funding (PE 0605041A EV5). FY2023 RDTE Plans: \$20.712M FY2023 funding provides for managed professional services to support Risk Management Framework/Authorization to Operate (RFM/ATO), security updates, system support, patches, and licenses through the management orchestration tool - Rapid Analytic Deployment Management Framework (RADMF). FY2023 funding supports the Lower Echelon Analytic Platform (LEAP) and the LEAP Tactical (LTAC) integration, testing, and installation on tactical and garrison level systems at selected bases, camps, posts, and stations. FY2023 funding also supports continuous development of BDP applications and analytics to include the associated engineering, integration, cybersecurity, testing, and training for new capability releases through the Cyberspace Analytics Development Support Contract. <b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> FY2023 funding adjustment decreases due to transferring cloud hosting funding responsibility to ARCYBER for cloud hosting of 14 Petabyte (PB) NIPR, 3 PB SIPR, and 3 PB JWICS starting in FY23 and future years defense program (FYDP).				
<b>Title:</b> Defensive Cyber Operations (DCO) - Mission Planning (PEO EIS) <b>Description:</b> DCO Mission Planning (DCOMP) Solution is a software solution that facilitates situational awareness and understanding, workflow for order execution, and capabilities that bridge the gap between strategic, operational, and tactical cyberspace operators which enable targeted decision support products on existing DCO systems. <b>FY 2022 Plans:</b> FY2022 RDTE Plans: \$4.108M		1.110	4.108	2.809

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022		
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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
<p>FY2022 funding supports development engineering, integration, and testing of three capability releases (software upgrades). Delivers mission command and planning at all levels supporting Cyber Defense Forces. Creates a DCO mission execution framework by utilizing the DCOMP Solution to collaborate, understand, plan, and manage DCO missions in real-time. Offers a shared situational awareness amongst cyberspace defenders about their missions and areas of operation. It is anticipated that Mission Planning will achieve FOC in 4QFY2022. FOC shall be considered attained when DCOMP capabilities are met IAW functional values agreed upon by the capability developer, operational user, program office, and evaluators; FOC additionally requires the DCOMP solution to be capable of autonomously allocating virtual resources and installing DCO tools within the corresponding guest operating systems so that cyberspace defenders can immediately conduct missions upon maneuvering to the supporting infrastructure.</p> <p><b>FY 2023 Plans:</b> Prior to BA8 Pilot program, this capability was funded with RDTE funding (PE 0605041A EV5). FY2023 RDTE Plans: \$2.809M FY2023 DCOMP solution will transition to Joint Cyber Command and Control (JCC2). FY2023 funding supports the transition and sustainment of the DCOMP applications during the transition to JCC2. FY2023 also supports development of the Army's specific requirements not delivered through the joint solution under JCC2.</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Due to the transition of DCOMP solution to JCC2, remaining FY2023 funding supports the Army's specific requirements which are not part of the joint solution through JCC2.</p>					
<p><b>Title:</b> Defensive Cyber Operations (DCO) - Tools Suite (PEO EIS)</p> <p><b>Description:</b> DCO Tools Suite is a flexible and dynamic software based suite of warfighting capabilities that enables Cyber Protection Teams (CPTs), Regional Cyber Centers (RCCs), and in some cases local defenders to perform DCO and cybersecurity actions. DCO tools consists of prepositioned and tailorable software packages that are integrated and available at all echelons to support or directly cause effects through the execution of Cyber Mission Force (CMF) and cyberspace workforce tasks. They are executed or managed within a DCO platform.</p> <p><b>FY 2022 Plans:</b> FY2022 OPA Plans: \$3.393M FY2022 funding supports procurement of new tools and renewal of existing tools providing the following capabilities: New capabilities include Network visualization within the cloud, Security Orchestration Automation and Response (SOAR), Single Node Solution (Operating System pilot), and testing of new requirements like a possible Industrial Control System/Supervisory Control and Data Acquisition (ICS/SCADA) solution; and Renewals include capabilities like Discovery (Network), Vulnerability Analysis, Command and Control, Threat Emulation, Acquisitions Data, High Speed Data Transport, Endpoint Detection and Recovery</p>			18.541	25.667	21.486



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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022		
Appropriation/Budget Activity 2040 / 8		R-1 Program Element (Number/Name) PE 0608041A / Defensive CYBER - Software Prototype Development	Project (Number/Name) CD1 / Defensive Cyber - Software Prototype Devel		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2021	FY 2022	FY 2023
<p>(EDR), intel analysis, Continuous Monitoring, Mitigate/Clear/Remediate, Event Correlation, DevSecOps, license renewals, and new equipment training. A new tools suite will be procured every year. Each new tools suite is derived from ARCYBER's annually published requirements and priorities. Tools suites may differ from year to year as some tools are divested, while new tools are added to include any innovations or advances in technology. DCO Tools Suite v4 will begin in FY2022, and Tools Suite v5 in FY2023. The users and operators of the tools are the CPTs. The increase in funding will allow the PM to prototype future tools that may be added to the tool suite purchase.</p> <p>FY2022 OMA Plans: \$22.274M FY2022 funding support license renewals and professional services.</p> <p><b>FY 2023 Plans:</b> Prior to BA8 Pilot program, this capability would have been funded with OPA funding (PE 0128B63000) and OMA funding. FY2023 OPA Plans: \$2.793M FY2023 OMA Plans: \$18.693M FY2023 funding supports new tools, training, license renewals, and professional services.</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> FY2023 decrease due to funding aligned to PE 0608041A Project Code DD2 in FY2023.</p>					
<p><b>Title:</b> Defensive Cyber Operations (DCO) - User Activity Monitoring (PEO EIS)</p> <p><b>Description:</b> DCO User Activity Monitoring (UAM) is the primary capability within the Army's overall Insider Threat (InT) program. UAM is mainly a software-based, scalable solution that has an on-premise solution and a cloud solution. It proactively identifies and mitigates internal risks associated with the theft or misuse of critical, mission essential data. It utilizes an integrated approach with a centralized UAM cell sending data to a core Insider Threat Hub.</p> <p><b>FY 2022 Plans:</b> FY2022 RDTE Plans: \$11.590M FY2022 funding supports development engineering, integration, and testing of the cloud based UAM Capability Suite to support ARCYBER and the CIO-G6 Special Access Program (SAP) Community. This entails continued behavioral pattern analysis, license renewals and maintenance, expanding production to tactical end point users, and transition from the on-premise solution to the cloud solution with the Army's Big Data Platform. FY2022 focuses on the deployable UAM capability that will be configured to monitor, capture, and analyze data in a congested, complex, and highly contested cyberspace and electromagnetic environment. The capability at the tactical level will be tailored to send alerts to a higher level analysis cell (ex. Regional Cyber Center (RCC) or Combatant Command Joint Cyber Center). FOC will be achieved in 2QFY2024.</p>			3.639	13.000	12.155

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022		
Appropriation/Budget Activity 2040 / 8	R-1 Program Element (Number/Name) PE 0608041A / <i>Defensive CYBER - Software Prototype Development</i>	Project (Number/Name) CD1 / <i>Defensive Cyber - Software Prototype Development</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
FY2022 OMA Plans: \$1.410M FY2022 funding support (1) PB cloud hosting for JWICS. UAM Cloud capability will utilize machine learning behavior anomaly detection and data visualization to identify security threats in near real-time. <b>FY 2023 Plans:</b> Prior to BA8 Pilot program, this capability was funded with RDTE funding (PE 0605041A EV5). FY2023 RDTE Plans: \$12.155M FY 2023 funding supports continued development engineering, integration, and testing of the cloud based UAM Capability Suite to support ARCYBER and the CIO-G6 Special Access Program (SAP) Community. This entails continued behavioral pattern analysis, license renewals and maintenance, expanding production to tactical end point users, and transition from the on-premise solution to the cloud solution with the Army's Big Data Platform. FY 2023 focuses on the continued deployable UAM capability that will be configured to monitor, capture, and analyze data in a congested, complex, and highly contested cyberspace and electromagnetic environment. The capability at the tactical level will be tailored to send alerts to a higher level analysis cell (ex. Regional Cyber Center or Combatant Command Joint Cyber Center). <b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> FY2023 decrease related to software license quantities and training events.				
<b>Title:</b> Defensive Cyber Operations (DCO) - Forensics and Malware Analysis (PEO EIS) <b>Description:</b> DCO Forensics and Malware Analysis (F&MA) capability is a software/hardware based solution enabling global, regional, and local cyberspace defenders to perform forensics either remotely or locally. Forensics is evidence related and Malware capabilities provides a sandboxlike, virtual environment that allows for the conduct of real-time, automated and dynamic malware decomposition and behavior analysis. Forensics gives cyberspace defenders the ability to collect, process, search, and analyze evidence from portable electronic devices, removable media, system hard drives, and random access memory. This process rapidly triages an incident and place the impacted system(s) back in service. <b>FY 2022 Plans:</b> FY2022 OMA Plans: \$2.645M FY2022 funding supports licenses renewals, maintenance, professional services and potential training activities as well as the delivery of a Sandbox Solution to further meet malware analysis requirements defined in the RDP. The malware analysis capability is a software-based application (Ida Pro) utilized by global and regional defenders to analyze malicious code in a sandbox-like, virtual environment (hardware). The malware sandbox capability will allow cyberspace defenders to collaborate in a member-only, protected environment; submit malware samples, check samples against popular open source tools and identify malware families using correlation and visualization tools. <b>FY 2023 Plans:</b>		1.231	2.645	2.116

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022		
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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
FY2023 RDTE Plans: \$2.116M FY2023 funding supports annual licenses renewals, maintenance, professional services for completion of fielding, and program support costs. <b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> FY2023 funding decrease related to no hardware costs are required.				
<b>Title:</b> Defensive Cyber Operations (DCO) - Threat Emulation (PEO EIS) <b>Description:</b> DCO Threat Emulation capability is a software based suite of tools used to gain access to evaluated networks through multi-vectors of unknown, partially known, or known access methods. Threat Emulation will enable the implementation of real world threat tactics, techniques, and procedures (TTPs) against risk areas such as web services, endpoints, passwords and identities, phishing and social engineering, mobile devices, and wired/wireless network systems in order to reveal critical security exposures. <b>FY 2022 Plans:</b> FY2022 RDTE Plans: \$3.078M FY2022 funding supports the production phase and an increase in engineering, integration and testing. During this time, the work in the production phase will ensure that the capability meets all Risk Management Framework (RMF) requirements needed for the capability to be used in an open network. Additionally, FY22 funds support the development of training and support materials to be provided to designated units at the time of fielding. <b>FY 2023 Plans:</b> Prior to BA8 Pilot program, this capability was funded with RDTE funding (PE 0605041A EV5). FY2023 RDTE Plans: \$6.686M FY2023 funds licenses to support up to 5000 endpoint agents for the key operational user footprint, continuous modernization and support costs, and (12+) On-Premise VM Management Consoles deployed to RCC-C, RCC-P, RCC-E, RCC-SWA, RCC-K, PCTE, I2CEWS, and the MDTF. <b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> FY2023 funding increase supports additional licenses to support up to 5000 endpoint agents.		1.584	3.078	6.686
<b>Title:</b> Defensive Cyber Operations (DCO) - Garrison DCO Platform - Next Generation (PEO EIS) <b>Description:</b> Modernization of the Garrison DCO Platform (GDP) solution to a next generation garrison platform in the future, one system will be capable of reaching multiple locations as opposed to fielding one at every identified location. Each of these locations will still require equipment at the local level, such as network tapping equipment and sensors to feed information.		-	-	5.755

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022		
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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<b>FY 2023 Plans:</b> FY2023 RDTE Plans: \$5.755M Garrison DCO Platform (GDP) was added to PE 0608041A Project Code CD1 in FY2023 to support development of GDP next generation garrison platform.				
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Garrison DCO Platform (GDP) was added to PE 0608041A Project Code CD1 in FY2023 to support development of GDP next generation garrison platform.				
<b>Title:</b> Defensive Cyber Operations (DCO) - Counter Infiltration (PEO EIS)  <b>Description:</b> Counter Infiltration (formerly Threat Deception) supports the global defenders the ability to conduct Counter Infiltration operations to detect and respond to advanced persistent threat (APT) within the defended network enclave. Our Cyber Defenders employ this capability to conduct defensive cyberspace operations (DCO) internal defensive measures (DCO-IDM) to detect and respond to adversary malicious presence and actions. This capability provides the functional ability conduct DCO-IDM using deception tactics, techniques, and procedures (TTP). This capability provides the means employing fundamental military principles of deception (ways) to conduct effective DCO-IDM mission.		-	-	1.255
<b>FY 2023 Plans:</b> FY2023 RDTE Plans: \$1.255M Counter Infiltration was added to PE 0608041A Project Code CD1 in FY2023 to support prototyping effort for Counter Infiltration capability.				
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Counter Infiltration was added to PE 0608041A Project Code CD1 in FY2023 to support prototyping effort for Counter Infiltration capability.				
<b>Title:</b> Defensive Cyber Operations (DCO) - DCO Development Environment (PEO EIS)  <b>Description:</b> DCO Development Environment (DCODE) (formerly Forge) is a physical and virtual assets that provides continual integration, upgrade, assess, optimization and Soldier operational environment. It is designed to provide centralized lifecycle management and consists of the following capabilities: (1) Forge - physical or virtual asset that provides integration and assessment capabilities during the development and integration phases of operations (centrally managed patching and security); and (2) Development Network - provides the capability to remote into multiple networks (provides safe and secure infrastructure framework for Cyber Protection Teams (CPTs)).		-	8.500	-
<b>FY 2022 Plans:</b>				

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022		
Appropriation/Budget Activity 2040 / 8	R-1 Program Element (Number/Name) PE 0608041A / Defensive CYBER - Software Prototype Development	Project (Number/Name) CD1 / Defensive Cyber - Software Prototype Development		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
FY 2022 RDTE Plans: \$8.500M FY 2022 funding transferred from RDTE PE 0605041A EV5. The funding will continue assessment of new cyber technologies within controlled environment, assesses capabilities in integrated environment, provides virtual training access 24/7 worldwide, and assesses/pushes approved enhancement remotely. <b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> FY2023 funding is reported under RDTE PE 0605041A EV5.				
<b>Title:</b> Defensive Cyber Operations (DCO) - Management Services (PEO EIS)  <b>Description:</b> Funding provides program management services and support from a mix of government matrix personnel and contractor management services for implementation, fielding, system engineering, logistics, program management and acquisition support.  <b>FY 2022 Plans:</b> FY 2022 RDTE Plans: \$2.070M FY 2022 OPA Plans: \$5.927M  FY 2022 funding provides continued program management services and support from a mix of government matrix personnel and contractor management services for implementation, fielding, system engineering, logistics, program management and acquisition support.  <b>FY 2023 Plans:</b> Prior to BA8 Pilot program, the support was funded with RDTE (PE 0605041A EV5) and OPA (PE 0128B63000) funding. FY2023 funding provides continued program management services and support from a mix of government matrix personnel and contractor management services for implementation, fielding, system engineering, logistics, program management and acquisition support.  <b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> FY2023 funding increase to support government matrix and contractors performing mission critical implementation, fielding, system engineering, logistics, programmatic, and acquisition support for eight defensive cyber programs of record.		9.009	7.997	13.375
<b>Title:</b> Defensive Cyber Operations (DCO) - Rapid Cyber Prototyping (ARCYBER)  <b>Description:</b> ARCYBER Rapid Cyber Prototyping provides software based capabilities that can quickly respond to emerging cyber threats and keep up with threat technology; while supporting Multi-Domain operations. ARCYBER identifies potential development and prototyping efforts via Cyber Needs Forms (CNFs) based on operational feedback, changes in the operational information environment and/or trends of adversarial activity; which drive CONOP and Tactics Techniques and Procedures (TTP)		0.465	2.501	-

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army									Date: April 2022		
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B. Accomplishments/Planned Programs (\$ in Millions)									FY 2021	FY 2022	FY 2023
modifications. These are separate and distinct from DCO programmed efforts already funded or budgeted for by PM DCO and are used to rapidly address a network threat/vulnerability.											
FY 2022 Plans: FY 2022 RDTE Plans: \$2.501M ARCYBER will continue to leverage Limited Acquisition Authority (LAA) for solutions that will enable solving more complicated problems that span Cyber, EW, and IO domains through rapid prototyping and capability assessments, which is outside of approved Requirements Definition Packages (RDPs) but within the scope of the FY 2018-2022 IT Box.											
FY 2022 to FY 2023 Increase/Decrease Statement: No funding requests in FY2023.											
Accomplishments/Planned Programs Subtotals									56.706	108.841	86.349
C. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• B63103: Advanced Cyber Tool Development	41.153	27.389	0.000	-	0.000	-	-	-	-	0.000	68.542
• B66350: ARCYBER DEFENSIVE CYBER OPERATIONS	-	-	18.239	-	18.239	-	-	-	-	0.000	18.239
• B89001: Insider Threat Program - Unit Activity Monitoring	1.760	-	1.796	-	1.796	1.647	1.787	1.792	1.792	0.000	10.574
• 0605041A: Defensive CYBER Tool Development	28.544	18.811	33.029	-	33.029	17.664	10.662	10.698	10.631	0.000	130.039
Remarks											
OPA PE B63103 - DCO hardware procurement, fielding, and new equipment training for Garrison DCO Platform (GDP), Deployable Defensive Systems (DDS), and DCODE Armory.											
OPA PE B66350 (New OPA line starting in FY2023) - DCO hardware procurement, fielding, and new 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 0605041A Project EV5 - DCO platform infrastructure, integration, and assessments.											
D. Acquisition Strategy											
The DCO Information System Initial Capabilities Document (IS ICD) was approved on 19 December 1017 by the Army Requirements Oversight Council (AROC). DCO programs are under an IT Box construct with five year term (FY2018-2022) which aligns with current Requirements Definition Packages (RDPs). IT Box establishes											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Army		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 2040 / 8	<b>R-1 Program Element (Number/Name)</b> PE 0608041A / <i>Defensive CYBER - Software Prototype Development</i>	<b>Project (Number/Name)</b> CD1 / <i>Defensive Cyber - Software Prototype Development</i>
<p>funding thresholds, by appropriation, for a program over the capability's projected lifecycle of five (5) years. Current IT Box will expire in 4QFY2022 and planned to be renewed in 3QFY2022.</p> <p>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. Under further consideration, the MDA assessed the TDI program and determined that TDI meets the criteria for an ACAT IV program and MDA delegation. The program is considered low risk due to program maturity and continued use of Commercial Off the Shelf (COTS) tools within the TDI baseline. On 23 November 2021, the MDA approved delegation of the TDI program to the Program Manager (PM) and re-designation of the program to ACAT IV. The TDI program's RDP was approved on 16 July 2018 by the Army Requirement Oversight Council (AROC). The TDI program office will develop and deploy preconfigured software in a series of capability drops (CD) in order to deliver full functional values of the RDP that align with DCO priorities. The TDI program is under an Information Technology (IT) Box construct with a five (5) year term (FY2018-FY2022) which aligns with the current requirements (includes initial capability drop through CD3). The TDI Initial Capability integrated the initial DCO tool suite on the TSI hardware platform and enabled remote connection. CD1 will integrate the enhanced DCO tool suite that will expand the sensor architecture to more command post applications. CD 2 will integrate the enhanced DCO tool suite that will leverage machine learning and expand the data collection beyond the command post to the extended tactical network. This will finalize integration of current DCO remote operations capability to facilitate timely escalation of remote incident response. CD3 will integrate the enhanced DCO tool suite that will enable broader data collection and data aggregation (including existing logs from other Programs of Record (PoR), and the ability for WiFi and 4G connection.</p> <p>The TDI program achieved initial capability delivery 1QFY2020. Full Deployment for the current IT Box (FY2018-FY2022) is planned for 3QFY2023 with the completion of CD3. TDI Full Deployment is defined as when TDI has completed the development and testing of the last capability drop within the IT Box (reaching full functional values of the RDP) and has transferred the capability to the CPCE/TSI program to commence fielding. The TDI IT Box will be renewed in FY2022 for the following five (5) year term (FY2023-FY2027). 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 their fielding schedule.</p> <p>The ARB approved GDP on 27 February 2018; Cyber Analytics and DCO Tool Suite RDPs on 18 May 2018; Mission Planning on 8 November 2018; User Activity Monitoring and Forensics and Malware Analysis on 18 March 2019; and Threat Emulation on 24 August 2020. The Counter Infiltration approval is targeted for 3QFY2022. The MDA designated these as ACAT IV programs. Under subsequent reviews, the MDA approved agile acquisition approach to develop and deliver pre-configured software in a series of releases and capability drops in order to deliver full functional values of the RDP that align with DCO priorities. DCO programs utilize standard and FY 2018 National Defense Authorization Act (NDAA) Section 874 agile pilot evolutionary acquisition processes (30-90 rapid acquisition approach). DCO continually delivers new technologies and capabilities as a prototype and fields updated capabilities. DCO contract strategy utilizes multiple existing contracts vehicles to include Other Transactional Authority (OTA), Federal Acquisition Regulation (FAR)-based, Blanket Purchase Agreement (BPA), and Basic Ordering Agreement (BOA).</p>		

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2023 Army</b>												<b>Date: April 2022</b>			
<b>Appropriation/Budget Activity</b> 2040 / 8						<b>R-1 Program Element (Number/Name)</b> PE 0608041A / <i>Defensive CYBER - Software Prototype Development</i>						<b>Project (Number/Name)</b> CD1 / <i>Defensive Cyber - Software Prototype Development</i>			
<b>Management Services (\$ in Millions)</b>				<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023 Base</b>		<b>FY 2023 OCO</b>		<b>FY 2023 Total</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>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
DCO - Tactical DCO Infrastructure (TDI) (PEO C3T)	Various	CACI;CECOM : APG, MD	-	0.376	Nov 2020	0.582	Mar 2022	-		-		-	Continuing	Continuing	-
DCO - Management Services (PEO EIS)	SS/TBD	Various : Various	-	9.009	Feb 2021	7.997	Feb 2022	13.375	Feb 2023	-		13.375	Continuing	Continuing	-
<b>Subtotal</b>			-	9.385		8.579		13.375		-		13.375	Continuing	Continuing	N/A
<b>Product Development (\$ in Millions)</b>				<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023 Base</b>		<b>FY 2023 OCO</b>		<b>FY 2023 Total</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>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
DCO - Tactical DCO Infrastructure (TDI) (PEO C3T)	Various	Parsons; CECOM SEC; CCDC : APG, MD	-	4.065	Nov 2020	4.176	Dec 2021	-		-		-	Continuing	Continuing	-
DCO - Cyber Analytics (PEO EIS)	C/FFP	Army Contracting Command - Rock Island (ACC-RI) : Rock Island, IL	-	16.127	Mar 2021	35.800	Mar 2022	20.712	Mar 2023	-		20.712	Continuing	Continuing	-
DCO - Tools Suite (PEO EIS)	C/FFP	ACC-RI : Rock Island, IL	-	18.541	Mar 2021	25.667	Mar 2022	21.486	Mar 2023	-		21.486	Continuing	Continuing	-
DCO - Mission Planning (PEO EIS)	C/FFP	ACC-RI : Rock Island, IL	-	1.110	Feb 2021	4.108	Feb 2022	2.809	Feb 2023	-		2.809	Continuing	Continuing	-
DCO - User Activity Monitoring (PEO EIS)	C/FFP	ACC-RI : Rock Island, IL	-	3.639	Feb 2021	13.000	Feb 2022	12.155	Feb 2023	-		12.155	Continuing	Continuing	-
DCO - Forensics and Malware (PEO EIS)	C/FFP	ACC-RI : Rock Island, IL	-	1.231	Mar 2021	2.645	Mar 2022	2.116	Mar 2023	-		2.116	Continuing	Continuing	-
DCO - Threat Emulation (PEO EIS)	C/FFP	ACC-RI : Rock Island, IL	-	1.584	Feb 2021	3.078	Feb 2022	6.686	Feb 2023	-		6.686	Continuing	Continuing	-
DCO - Garrison DCO Platform (PEO EIS)	C/FFP	ACC-RI : Rock Island, IL	-	-		-		5.755		-		5.755	Continuing	Continuing	-
DCO - Counter Infiltration (PEO EIS)	C/FFP	ACC-RI : Rock Island, IL	-	-		-		1.255		-		1.255	Continuing	Continuing	-



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army												Date: April 2022			
Appropriation/Budget Activity 2040 / 8						R-1 Program Element (Number/Name) PE 0608041A / Defensive CYBER - Software Prototype Development				Project (Number/Name) CD1 / Defensive Cyber - Software Prototype Development					
Product Development (\$ 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
DCO - Rapid Cyber Prototyping (ARCYBER)	C/FFP	ACC-RI : Rock Island, IL	-	0.465	Apr 2021	2.501	Apr 2022	-		-		-	Continuing	Continuing	-
Subtotal			-	46.762		90.975		72.974		-		72.974	Continuing	Continuing	N/A
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
DCO - Tactical DCO Infrastructure (TDI) (PEO C3T)	Various	DLA; CECOM ILSC : Philadelphia, PA; APG, MD	-	0.179	Jul 2021	0.213	Jun 2022	-		-		-	Continuing	Continuing	-
Subtotal			-	0.179		0.213		-		-		-	Continuing	Continuing	N/A
Test and Evaluation (\$ 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
DCO - Tactical DCO Infrastructure (TDI) (PEO C3T)	Various	ATEC; CTSF : APG, MD; Ft. Hood TX	-	0.380	Jan 2021	0.574	Mar 2022	-		-		-	Continuing	Continuing	-
DCO - DCO Development Environment (PEO EIS)	MIPR	ATEC, SEC and TYAD : Various	-	-		8.500	Jan 2022	-		-		-	Continuing	Continuing	-
Subtotal			-	0.380		9.074		-		-		-	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			-	56.706		108.841		86.349		-		86.349	Continuing	Continuing	N/A
Remarks															
Tactical DCO Infrastructure (TDI) funding transferred to PE 0605041A Project Code XU3 beginning in FY2023. Contract award dates reflect when contract option years plan to be exercised/when funding plans to be obligated.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army

Date: April 2022

Appropriation/Budget Activity

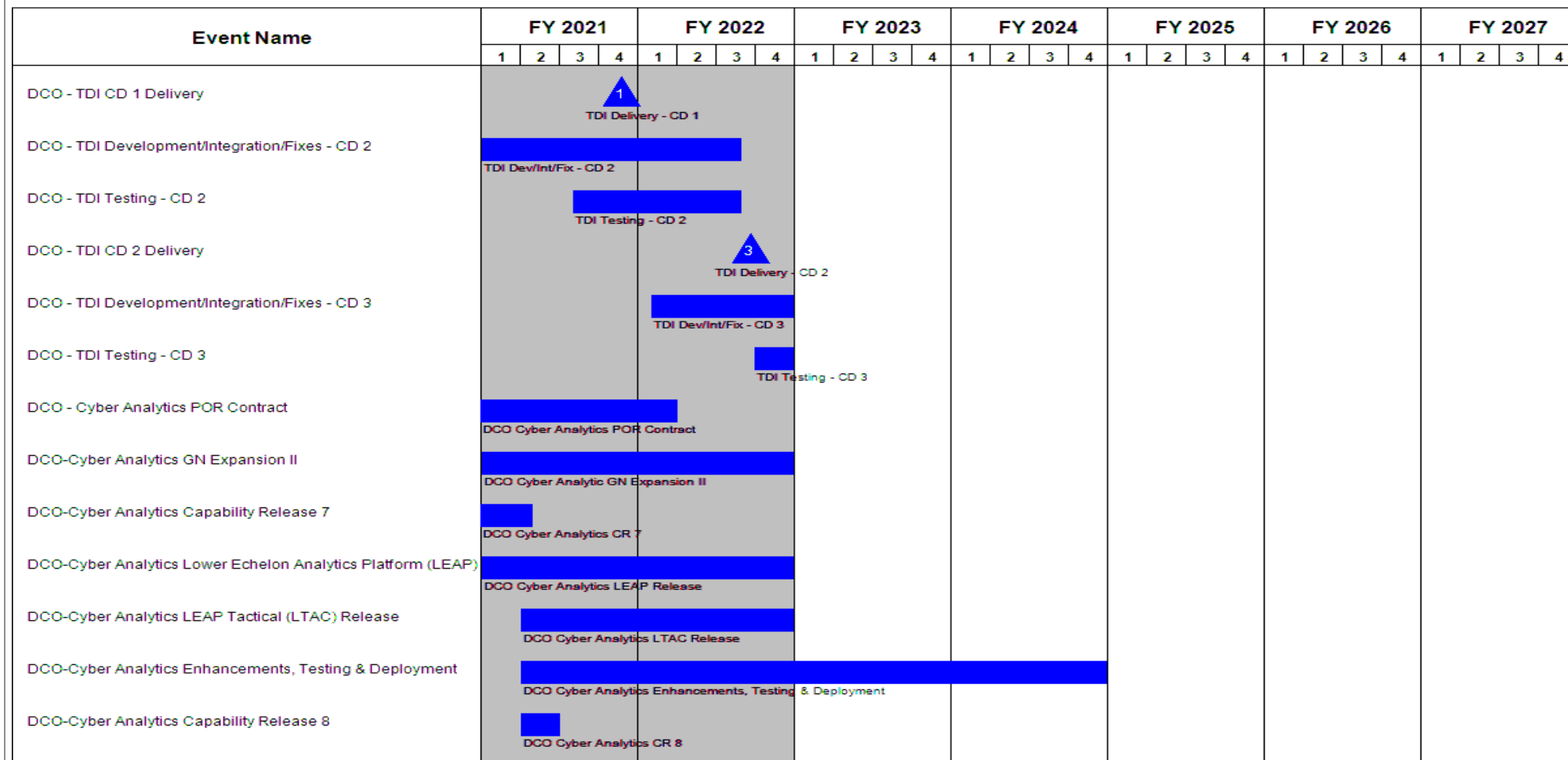
2040 / 8

R-1 Program Element (Number/Name)

PE 0608041A / Defensive CYBER - Software Prototype Development

Project (Number/Name)

CD1 / Defensive Cyber - Software Prototype Development



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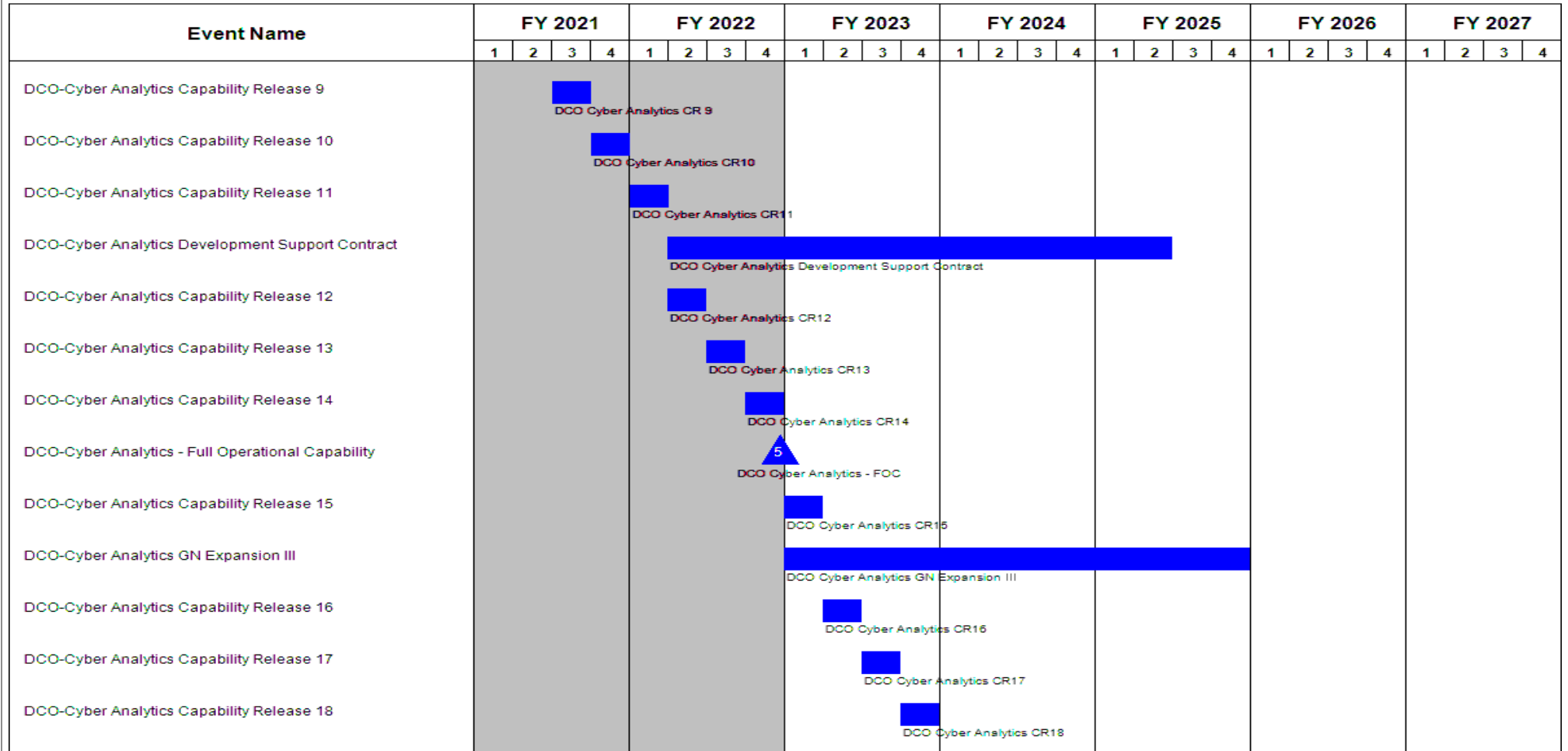
**Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army**

**Date:** April 2022

**Appropriation/Budget Activity**  
2040 / 8

**R-1 Program Element (Number/Name)**  
PE 0608041A / *Defensive CYBER - Software Prototype Development*

**Project (Number/Name)**  
CD1 / *Defensive Cyber - Software Prototype Devel*



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**Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army**

**Date:** April 2022

**Appropriation/Budget Activity**

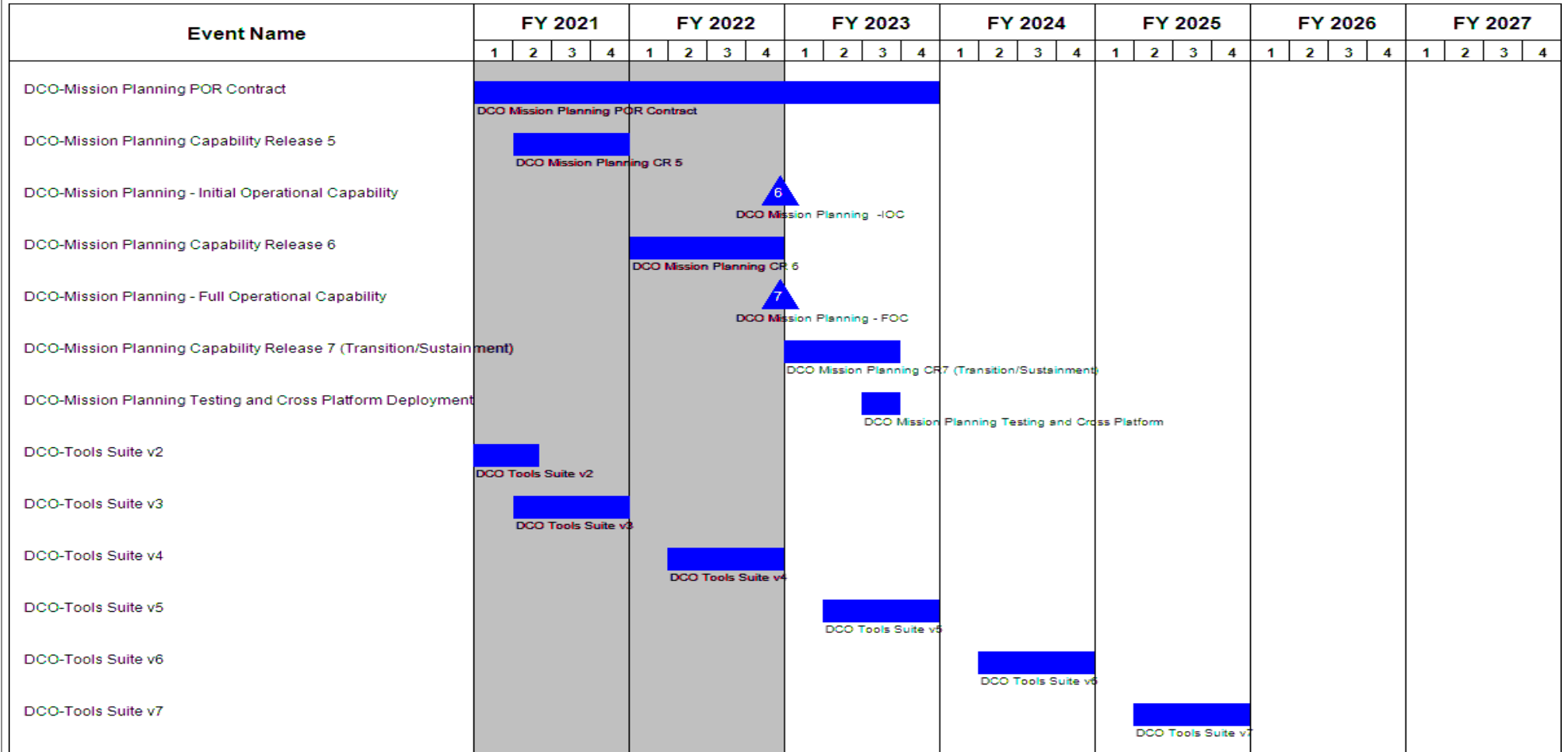
2040 / 8

**R-1 Program Element (Number/Name)**

PE 0608041A / *Defensive CYBER - Software Prototype Development*

**Project (Number/Name)**

CD1 / *Defensive Cyber - Software Prototype Devel*



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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army

Date: April 2022

Appropriation/Budget Activity

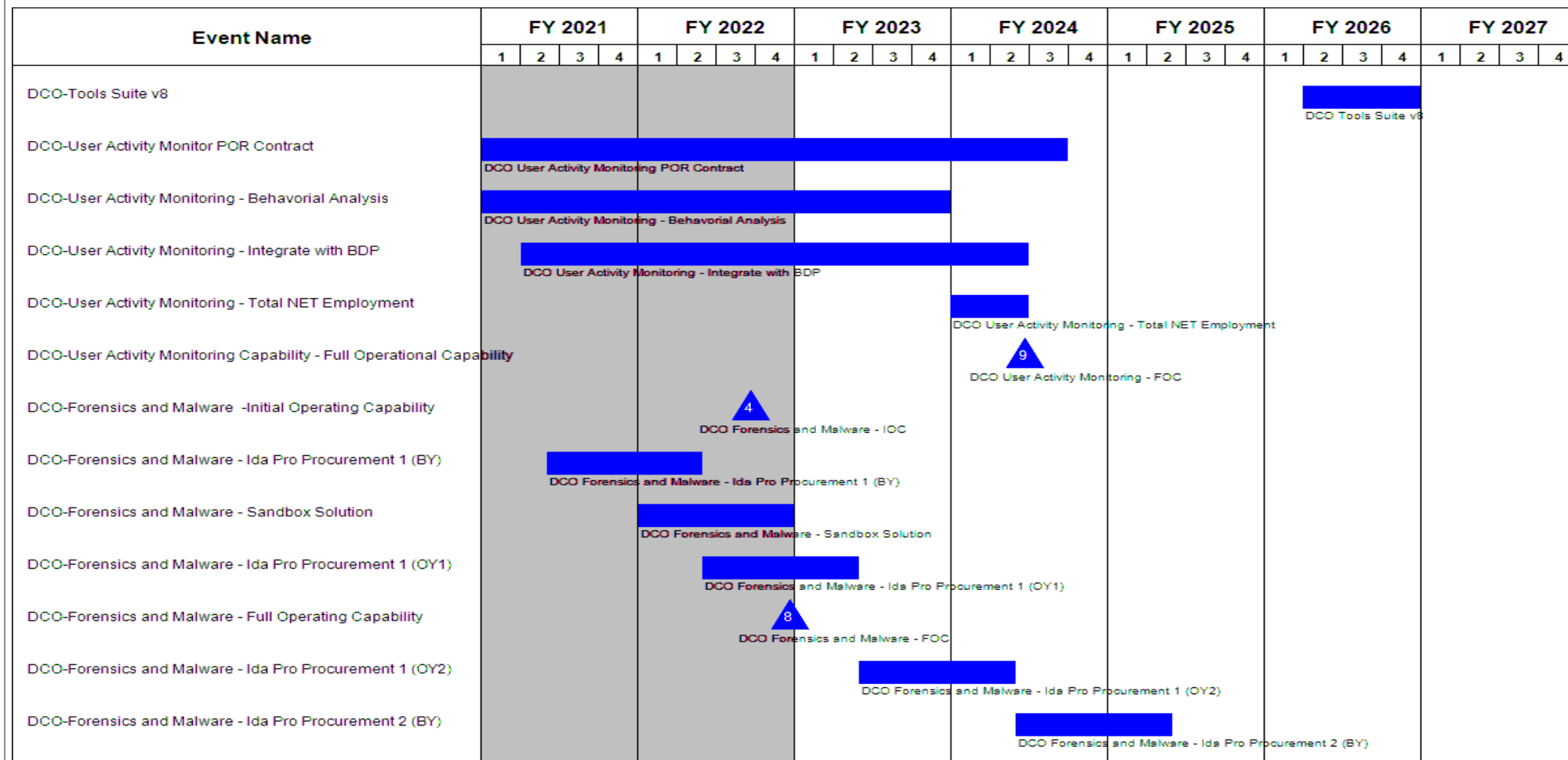
2040 / 8

R-1 Program Element (Number/Name)

PE 0608041A / Defensive CYBER - Software Prototype Development

Project (Number/Name)

CD1 / Defensive Cyber - Software Prototype Development



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**Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 2040 / 8	<b>R-1 Program Element (Number/Name)</b> PE 0608041A / <i>Defensive CYBER - Software Prototype Development</i>	<b>Project (Number/Name)</b> CD1 / <i>Defensive Cyber - Software Prototype Development</i>
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Event Name	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
DCO-Forensics and Malware - Ida Pro Procurement 2 (OY1)																												
DCO-Forensics and Malware - Encase Investigator Maintenance (BY)																												
DCO-Forensics and Malware - Encase Investigator Maintenance (OY1)																												
DCO-Forensics and Malware - Encase Investigator Maintenance (OY2)																												
DCO-Forensics and Malware - Encase Investigator Maintenance (OY3)																												
DCO-Threat Emulation POR Contract																												
DCO-Threat Emulation - Social Engineering Toolkit																												
DCO-Threat Emulation - Exploit Code Generator																												
DCO-Threat Emulation - Proprietary Interface																												
DCO-Threat Emulation - Initial Operational Capability																												
DCO-Threat Emulation - Full Operational Capability																												
DCO-Garrison DCO Platform - Next Generation Pilot																												
DCO-Garrison DCO Platform - Next Generation Procurement																												

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2023 Army</b>			<b>Date:</b> April 2022	
<b>Appropriation/Budget Activity</b> 2040 / 8		<b>R-1 Program Element (Number/Name)</b> PE 0608041A / <i>Defensive CYBER - Software Prototype Development</i>		<b>Project (Number/Name)</b> CD1 / <i>Defensive Cyber - Software Prototype Development</i>

Event Name	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
DCO-Counter Infiltration - Prototyping																												
DCO-Counter Infiltration - Procurement / Renewals																												
DCO-DCO Development Environment																												
DCO-ARCYBER Rapid Cyber Prototyping (Rapid Proto / Capability Assessments)																												

**Note**

Tactical DCO Infrastructure (TDI) scheduled events and milestones beginning in FY2023 are reflected within RDTE PE 0605041A Project Code XU3.

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Exhibit R-4A, RDT&amp;E Schedule Details: PB 2023 Army

Date: April 2022

## Appropriation/Budget Activity

2040 / 8

## R-1 Program Element (Number/Name)

PE 0608041A / Defensive CYBER - Software Prototype Development

## Project (Number/Name)

CD1 / Defensive Cyber - Software Prototype Development

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DCO - TDI CD 1 Delivery	4	2021	4	2021
DCO - TDI Development/Integration/Fixes - CD 2	1	2021	3	2022
DCO - TDI Testing - CD 2	3	2021	3	2022
DCO - TDI CD 2 Delivery	3	2022	3	2022
DCO - TDI Development/Integration/Fixes - CD 3	1	2022	4	2022
DCO - TDI Testing - CD 3	4	2022	4	2022
DCO - Cyber Analytics POR Contract	2	2019	1	2022
DCO-Cyber Analytics GN Expansion II	1	2021	4	2022
DCO-Cyber Analytics Capability Release 7	1	2021	1	2021
DCO-Cyber Analytics Lower Echelon Analytics Platform (LEAP) Release	1	2021	4	2022
DCO-Cyber Analytics LEAP Tactical (LTAC) Release	2	2021	4	2022
DCO-Cyber Analytics Enhancements, Testing & Deployment	2	2021	4	2024
DCO-Cyber Analytics Capability Release 8	2	2021	2	2021
DCO-Cyber Analytics Capability Release 9	3	2021	3	2021
DCO-Cyber Analytics Capability Release 10	4	2021	4	2021
DCO-Cyber Analytics Capability Release 11	1	2022	1	2022
DCO-Cyber Analytics Development Support Contract	2	2022	2	2025
DCO-Cyber Analytics Capability Release 12	2	2022	2	2022
DCO-Cyber Analytics Capability Release 13	3	2022	3	2022
DCO-Cyber Analytics Capability Release 14	4	2022	4	2022
DCO-Cyber Analytics - Full Operational Capability	4	2022	4	2022
DCO-Cyber Analytics Capability Release 15	1	2023	1	2023



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Exhibit R-4A, RDT&amp;E Schedule Details: PB 2023 Army

Date: April 2022

## Appropriation/Budget Activity

2040 / 8

## R-1 Program Element (Number/Name)

PE 0608041A / Defensive CYBER - Software Prototype Development

## Project (Number/Name)

CD1 / Defensive Cyber - Software Prototype Development

Events	Start		End	
	Quarter	Year	Quarter	Year
DCO-Cyber Analytics GN Expansion III	1	2023	4	2025
DCO-Cyber Analytics Capability Release 16	2	2023	2	2023
DCO-Cyber Analytics Capability Release 17	3	2023	3	2023
DCO-Cyber Analytics Capability Release 18	4	2023	4	2023
DCO-Mission Planning POR Contract	1	2021	4	2023
DCO-Mission Planning Capability Release 5	2	2021	4	2021
DCO-Mission Planning - Initial Operational Capability	4	2022	4	2022
DCO-Mission Planning Capability Release 6	1	2022	4	2022
DCO-Mission Planning - Full Operational Capability	4	2022	4	2022
DCO-Mission Planning Capability Release 7 (Transition/Sustainment)	1	2023	3	2023
DCO-Mission Planning Testing and Cross Platform Deployment	3	2023	3	2023
DCO-Tools Suite v2	4	2020	2	2021
DCO-Tools Suite v3	2	2021	4	2021
DCO-Tools Suite v4	2	2022	4	2022
DCO-Tools Suite v5	2	2023	4	2023
DCO-Tools Suite v6	2	2024	4	2024
DCO-Tools Suite v7	2	2025	4	2025
DCO-Tools Suite v8	2	2026	4	2026
DCO-User Activity Monitor POR Contract	1	2021	3	2024
DCO-User Activity Monitoring - Behavioral Analysis	1	2021	4	2023
DCO-User Activity Monitoring - Integrate with BDP	2	2021	2	2024
DCO-User Activity Monitoring - Total NET Employment	1	2024	2	2024
DCO-User Activity Monitoring Capability - Full Operational Capability	2	2024	2	2024
DCO-Forensics and Malware -Initial Operating Capability	3	2022	3	2022
DCO-Forensics and Malware - Ida Pro Procurement 1 (BY)	2	2021	2	2022

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army			Date: April 2022	
Appropriation/Budget Activity 2040 / 8	R-1 Program Element (Number/Name) PE 0608041A / Defensive CYBER - Software Prototype Development		Project (Number/Name) CD1 / Defensive Cyber - Software Prototype Development	
	Start		End	
Events	Quarter	Year	Quarter	Year
DCO-Forensics and Malware - Sandbox Solution	1	2022	4	2022
DCO-Forensics and Malware - Ida Pro Procurement 1 (OY1)	2	2022	2	2023
DCO-Forensics and Malware - Full Operating Capability	4	2022	4	2022
DCO-Forensics and Malware - Ida Pro Procurement 1 (OY2)	2	2023	2	2024
DCO-Forensics and Malware - Ida Pro Procurement 2 (BY)	2	2024	2	2025
DCO-Forensics and Malware - Ida Pro Procurement 2 (OY1)	2	2025	2	2026
DCO-Forensics and Malware - Encase Investigator Maintenance (BY)	2	2021	2	2022
DCO-Forensics and Malware - Encase Investigator Maintenance (OY1)	2	2022	2	2023
DCO-Forensics and Malware - Encase Investigator Maintenance (OY2)	2	2023	2	2024
DCO-Forensics and Malware - Encase Investigator Maintenance (OY3)	2	2024	2	2025
DCO-Threat Emulation POR Contract	1	2021	4	2025
DCO-Threat Emulation - Social Engineering Toolkit	1	2021	4	2025
DCO-Threat Emulation - Exploit Code Generator	3	2021	2	2022
DCO-Threat Emulation - Proprietary Interface	1	2022	4	2022
DCO-Threat Emulation - Initial Operational Capability	1	2022	1	2022
DCO-Threat Emulation - Full Operational Capability	4	2024	4	2024
DCO-Garrison DCO Platform - Next Generation Pilot	2	2023	4	2024
DCO-Garrison DCO Platform - Next Generation Procurement	2	2025	4	2027
DCO-Counter Infiltration - Prototyping	1	2023	4	2023
DCO-Counter Infiltration - Procurement / Renewals	1	2024	4	2027
DCO-DCO Development Environment	1	2022	4	2022
DCO-ARCYBER Rapid Cyber Prototyping (Rapid Proto / Capablity Assessments)	3	2021	2	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army										Date: April 2022		
Appropriation/Budget Activity 2040 / 8					R-1 Program Element (Number/Name) PE 0608041A / <i>Defensive CYBER - Software Prototype Development</i>				Project (Number/Name) DD2 / <i>Joint Cyber Warfighting Architecture Software</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
DD2: <i>Joint Cyber Warfighting Architecture Software</i>	-	-	-	8.539	-	8.539	-	-	-	-	0.000	8.539
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This funding line is a key enabler of the Army Modernization Priorities in support Line of the Army Network Modernization Strategy Line of Effort (LOE) 1, Key Enabler for Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

FY2023 funding was aligned from BA8 Software Pilot Program PE 0608041A Project Code CD1.

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), FORSCOM, (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.

Defensive Cyber Tools and Analytics:

\* DCO - Tools Suite - (PEO EIS) - Garrison/Tactical Level

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

	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
<b>Title:</b> Defensive Cyber Operations (DCO) - Tools Suite (PEO EIS)	-	-	8.539
<b>Description:</b> DCO Tools Suite is a flexible and dynamic software based suite of warfighting capabilities that enables Cyber Protection Teams (CPTs), Regional Cyber Centers (RCCs), and in some cases local defenders to perform DCO and cybersecurity actions. DCO tools consists of prepositioned and tailorable software packages that are integrated and available at all echelons to support or directly cause effects through the execution of Cyber Mission Force (CMF) and cyberspace workforce tasks. They are executed or managed within a DCO platform.			
<b>FY 2023 Plans:</b>			

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army										Date: April 2022		
Appropriation/Budget Activity 2040 / 8				R-1 Program Element (Number/Name) PE 0608041A / Defensive CYBER - Software Prototype Development				Project (Number/Name) DD2 / Joint Cyber Warfighting Architecture Software				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2021	FY 2022	FY 2023
FY2023 funding was aligned from BA8 Software Pilot Program PE 0608041A Project Code CD1. FY2023 provides software licenses, professional services, and training for (60) Deployable Defensive System-Modular (DDS-M) kits to service Cyber Protection Teams (CPTs) in COMPO 1.												
FY 2022 to FY 2023 Increase/Decrease Statement: FY2023 funding was aligned from BA8 Software Pilot Program PE 0608041A Project Code CD1.												
Accomplishments/Planned Programs Subtotals										-	-	8.539
C. Other Program Funding Summary (\$ in Millions)												
Line Item	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	
• 0605041A: Defensive CYBER Tool Development	28.544	18.811	33.029	-	33.029	17.664	10.662	10.698	10.631	0.000	130.039	
• B63103: Advanced Cyber Tool Development	41.153	27.389	0.000	-	0.000	-	-	-	-	0.000	68.542	
• B66350: ARCYBER DEFENSIVE CYBER OPERATIONS	-	-	18.239	-	18.239	-	-	-	-	0.000	18.239	
• B89001: Insider Threat Program - Unit Activity Monitoring	1.760	-	1.796	-	1.796	1.647	1.787	1.792	1.792	0.000	10.574	
Remarks												
RDTE PE 0605041A Project EV5 - DCO platform infrastructure, integration, and assessments.												
OPA PE B63103 - DCO hardware procurement, fielding, and new equipment training for Garrison DCO Platform (GDP), Deployable Defensive Systems (DDS), and DCODE Armory.												
OPA PE B66350 (New OPA line starting in FY2023) - DCO hardware procurement, fielding, and new 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.												
D. Acquisition Strategy												
The DCO Information System Initial Capabilities Document (IS ICD) was approved on 19 December 1017 by the Army Requirements Oversight Council (AROC). DCO programs are under an IT Box construct with five year term (FY2018-2022) which aligns with current Requirements Definition Packages (RDPs). IT Box establishes funding thresholds, by appropriation, for a program over the capability's projected lifecycle of five (5) years. Current IT Box will expire in 4QFY2022 and planned to be renewed in 3QFY2022.												
The ARB approved DDS RDP on 27 February 2018, and DCO Tools Suite on 18 May 2018. The MDA designated this as ACAT IV program. Under subsequent reviews, the MDA approved agile acquisition approach to develop and deliver pre-configured software in a series of releases and capability drops in order to deliver full functional												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Army		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 2040 / 8	<b>R-1 Program Element (Number/Name)</b> PE 0608041A / <i>Defensive CYBER - Software Prototype Development</i>	<b>Project (Number/Name)</b> DD2 / <i>Joint Cyber Warfighting Architecture Software</i>
<p>values of the RDP that align with DCO priorities. DCO programs utilize standard and FY 2018 National Defense Authorization Act (NDAA) Section 874 agile pilot evolutionary acquisition processes (30-90 rapid acquisition approach). DCO continually delivers new technologies and capabilities as a prototype and fields updated capabilities. DCO contract strategy utilizes multiple existing contracts vehicles to include Other Transactional Authority (OTA), Federal Acquisition Regulation (FAR)-based, Blanket Purchase Agreement (BPA), and Basic Ordering Agreement (BOA).</p>		

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2023 Army												<b>Date:</b> April 2022			
<b>Appropriation/Budget Activity</b> 2040 / 8						<b>R-1 Program Element (Number/Name)</b> PE 0608041A / <i>Defensive CYBER - Software Prototype Development</i>				<b>Project (Number/Name)</b> DD2 / <i>Joint Cyber Warfighting Architecture Software</i>					

Product Development (\$ 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
DCO - Tools Suite (PEO EIS)	C/FFP	ACC-RI : Rock Island, IL	-	-		-		8.539	Mar 2023	-		8.539	0.000	8.539	-
<b>Subtotal</b>			-	-		-		8.539		-		8.539	0.000	8.539	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
<b>Project Cost Totals</b>	-	-	-	8.539	-	8.539	0.000	8.539	N/A

**Remarks**

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army																Date: April 2022												
Appropriation/Budget Activity 2040 / 8										R-1 Program Element (Number/Name) PE 0608041A / Defensive CYBER - Software Prototype Development								Project (Number/Name) DD2 / Joint Cyber Warfighting Architecture Software										
Event Name	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
DCO - Tools Suite									<div></div> DCO - Tools Suite																			

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 8	R-1 Program Element (Number/Name) PE 0608041A / Defensive CYBER - Software Prototype Development	Project (Number/Name) DD2 / Joint Cyber Warfighting Architecture Software

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DCO - Tools Suite	2	2023	3	2023