Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Army											Date: May 2021	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604760A *I Distributive Interactive Simulations (DIS) - Eng Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	-	7.480	7.605	7.453	-	7.453	-	-	-	-	-	-
C74: *Devel Simulation Tech*	-	0.959	0.963	0.945	-	0.945	-	-	-	-	-	-
C77: *Army Geospatial Data Master Plan*	-	0.735	0.703	0.540	-	0.540	-	-	-	-	-	-
C78: *One Semi-Automated Forces*	-	5.786	5.939	5.968	-	5.968	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The program element "Distributive Interactive Simulations - Engineering Development" applies to the Army's Advanced Simulation Program, which enables operational readiness and the development of concepts and systems for the Future Force through the application of new simulation technology and techniques. The development and application of simulation technology will provide the means to link electronically a range of various simulation tools in a manner that is transparent to the user. The amalgam of simulations and tools is linked together to enable execution of an event; to verify the scenarios, tactics/techniques and procedures; to train testers on new hardware/software; and to conduct trial test runs before costly live field tests. The tools developed are available for reuse by developers and users of simulations throughout the Army.

Project C74 funds the HQDA-chartered mission of the Simulation-to-Mission Command Interoperability (SIMCI) Overarching Integrated Product Team (OIPT) in support of Army Training and Readiness. The SIMCI OIPT mission is to provide policy recommendations to Army senior leadership to improve organizations by allowing Soldiers to fight in the same manner in which they train. This is accomplished by interoperability between Mission Command (MC) systems and the Modeling and Simulation (M&S) systems the Army uses to stimulate MC systems for training Soldiers and their Leaders. SIMCI also invests in targeted solutions to critical problem areas that exist between MC and Simulations. The SIMCI OIPT, led by Program Executive Office (PEO) Simulation, Training, and Instrumentation (STRI) and PEO Command Control Communications-Tactical (C3T), uses focused collaborative processes among its 30+ Army organizations to identify key/critical interoperability shortfalls and the required materiel solutions.

Project C77, Army Geospatial Data Master Plan, focuses on activities that start with data acquisition from multiple sources and culminate in (1) accurate, robust and timely geospatial data and data management and (2) integration and conversion tools that support multiple battle command, training and mission-rehearsal applications. Project C77 continues development efforts associated with the Ground-Warfighter Geospatial Data Model (GGDM) and Geospatial Data Standards.

One Semi-Automated Forces (OneSAF) Project C78 develops and delivers a software application that represents activities of units and forces in simulation to support Army Training and Readiness. The application is used by Army agencies to support the concept evaluation, experimentation, materiel acquisition and training throughout the communities. The focus of this project is systems/software engineering and design for development and evolution of the architecture and software tools for a universal system of Army computer-generated forces -- OneSAF. OneSAF is a high fidelity brigade-and-below SAF that represents a full range of operations, systems and control processes in support of stand-alone and embedded training and Research, Development and Acquisition (RDA) simulation applications. OneSAF is fully

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Army	Date: May 2021
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*

interoperable with the Army's emerging virtual, live, and division-and-above constructive simulations and provides next-generation simulation products. OneSAF replaces a variety of legacy simulations used within the Army to support analytic and training simulation activities.

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	7.801	7.892	7.888	-	7.888
Current President's Budget	7.480	7.605	7.453	-	7.453
Total Adjustments	-0.321	-0.287	-0.435	-	-0.435
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.321	-0.287			
• Adjustments to Budget Years	-	-	-0.435	-	-0.435

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	Project (Number/Name) C74 / *Devel Simulation Tech*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
C74: *Devel Simulation Tech*	-	0.959	0.963	0.945	-	0.945	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project C74 funds the HQDA-chartered mission of the Simulation-to-Mission Command Interoperability (SIMCI) Overarching Integrated Product Team (OIPT) in support of Army Training and Readiness. The SIMCI OIPT mission is to provide policy recommendations to Army senior leadership to improve organizations by allowing Soldiers to fight in the same manner in which they train. This is accomplished by interoperability between Mission Command (MC) systems and the Modeling and Simulation (M&S) systems the Army uses to stimulate MC systems for training Soldiers and their Leaders. SIMCI also invests in targeted solutions to critical problem areas that exist between MC and Simulations. The SIMCI OIPT, led by Program Executive Office (PEO) Simulation, Training, and Instrumentation (STRI) and PEO Command Control Communications-Tactical (C3T), uses focused collaborative processes among its 30+ Army organizations to identify key/critical interoperability shortfalls and the required materiel solutions.

The SIMCI OIPT provides the following: (1) Advisor to Army Leadership--improve MC and M&S interoperability programs, policies, directives, resourcing, and procedures; (2) Technical Investment--sponsor/support initiatives that seek common solutions to critical interoperability issues surrounding MC and M&S systems; (3) Outreach--conduct & participate in interoperability outreach activities. SIMCI investments consist primarily of cost-sharing initiatives, leveraging initial system solutions of acquisition programs to enhance the interoperability of multiple systems in the Joint Operational Environment. SIMCI investments accelerate implementation within MC and M&S systems, of common data models and information exchanges that are used by other Services and coalition nations, thus enhancing the inherent ability of Army systems to interoperate seamlessly in a Joint, Interagency, Intergovernmental, and Multinational (JIIM) environment.

FY 2022 base funding in the amount of $0.945 million continues progress with embedding simulation into Mission Command Systems via the Ozone Widget Framework, continues management of the SIMCI OIPT's Army-wide collaborative, interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. It is focused first on reducing costs and improving capabilities in the areas of automating Operational Plans, Orders, and Reports in support of Army, Joint, and Coalition operations. Objectives are: identify and articulate to HQDA senior leadership specific standards that require Army-wide implementation; co-develop data standards, architecture standards, implementation specifications and Joint/Coalition products; continue transition of SIMCI knowledge and proof-of-principle products to Army and Joint acquisition programs.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: Program Management for the SIMCI Overarching Integrated Product Team (OIPT) Projects.	0.959	0.963	0.945
Description: Program Management of the SIMCI OIPT's Army-wide collaborative, interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. The OIPT consists of a Product Director, engineers, and finance personnel.			

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C74 / *Devel Simulation Tech*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
FY 2021 Plans: Will continue management and support of the SIMCI OIPT'S Army-wide collaborative, interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. Will continue focus on gap-analysis of the current model and simulation programs and capabilities in the areas of Live, Virtual, and Constructive (LVC) simulations. This will support the Vice Chief of Staff of the Army's request to find redundancy within the Modeling and Simulation (M&S) community and reduce it. Objectives are to compare the current M&S capabilities with what will be required in the upcoming LVC-Information Assurance (LVC-IA) and Integrated Training Environment (ITE) environments, which will eventually become the Simulated Training Environment (STE) in 2021. This will be Army-wide, as well as, Joint combined interagency products. Focus on ITE with the creation of the blueprint for STE, which is slated to be implemented in FY 2021. ***FY 2022 Plans:*** Will continue management and support of the SIMCI OIPT'S Army-wide collaborative, interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. Will continue focus on gap-analysis of the current model and simulation programs and capabilities in the areas of Live, Virtual, and Constructive (LVC) simulations. This will support the Vice Chief of Staff of the Army's request to find redundancy within the Modeling and Simulation (M&S) community and reduce it. Objectives are to compare the current M&S capabilities with what will be required in the upcoming LVC-Information Assurance (LVC-IA) and Synthetic Environment (SE) environments. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY21 to FY22 decrease in funding due to budget constraints.			
Accomplishments/Planned Programs Subtotals	0.959	0.963	0.945

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

SIMCI uses other contract vehicles (internal/external) and awards money to work on specific technical projects. This provides the opportunity to leverage technical expertise from different agencies. SIMCI chooses projects that enhance current capabilities, closes the gaps of existing capabilities, and makes the determination for future projects that affect both the Mission Command and Live, Virtual, Constructive simulations environment. SIMCI only chooses those projects that meet specific requirements and criteria as stated above. It is one of SIMCI's missions to locate, utilize, or upgrade those projects or specific products that do just that.

D. Acquisition Strategy

SIMCI Overarching Integrated Product Team (OIPT) resources are allocated to multiple organizations in both the Mission Command (MC) and Modeling and Simulation (M&S) Communities. The funds are contracted to execute approved functions and to projects that advance the efforts of SIMCI and components-based architecture alignment. Products developed transition to the lead or sponsor's program which then maintains the product for the cost savings of itself and other programs in both

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
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Communities. The primary focus for these projects are the following: Embedded simulations with current Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems, gap-analysis for current simulations, and the proper implementation of Next-Generation modeling and simulation capabilities in regards to the Synthetic Training Environment (STE).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	Project (Number/Name) C74 / *Devel Simulation Tech*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	PEO STRI : Orlando, FL	10.423	0.140	Jan 2020	0.140	Jan 2021	0.140	Jan 2022	-		0.140	Continuing	Continuing	Continuing
SBIR/STTR	TBD	PEO STRI : Orlando, FL	0.326	-		-		-		-		-	0.000	0.326	-
FY 2020 SBIR/STTR Transfer	TBD	Various : Various	-	-		-		0.000		-		0.000	-	-	-
		Subtotal	10.749	0.140		0.140		0.140		-		0.140	Continuing	Continuing	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Transition of simulation initialization capability	Various	TBD : TBD	3.134	-		-		-		-		-	Continuing	Continuing	Continuing
Geospatial Initiative	Various	TBD : TBD	1.388	-		-		-		-		-	Continuing	Continuing	Continuing
Data Model applications and reference implementations	Various	TBD : TBD	2.363	-		-		-		-		-	Continuing	Continuing	Continuing
Implementation of Initialization Products	Various	TBD : TBD	2.255	-		-		-		-		-	Continuing	Continuing	Continuing
Initialization Study Implementation	Various	TBD : TBD	1.038	-		-		-		-		-	Continuing	Continuing	Continuing
Mission Comand systems data mediation/web services	Various	TBD : TBD	2.910	-		-		-		-		-	Continuing	Continuing	Continuing
Expanding MTOE System Architecture (SA) Data	Various	TBD : TBD	1.821	-		-		-		-		-	Continuing	Continuing	Continuing
C2 Adapter Web Services and Tools	Various	TBD : TBD	2.660	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	17.569	-		-		-		-		-	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	Project (Number/Name) C74 / *Devel Simulation Tech*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SIMCI Program/OIPT Support	Various	Various : Various	6.927	0.809	Jan 2020	0.798	Jan 2021	0.780	Jan 2022	-		0.780	Continuing	Continuing	Continuing
Army Initialization Program and Technical Work Groups (TWG)	Various	Various : Various	0.731	0.010	Jan 2020	0.025	Jan 2021	0.025	Jan 2022	-		0.025	Continuing	Continuing	Continuing
		Subtotal	7.658	0.819		0.823		0.805		-		0.805	Continuing	Continuing	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	35.976	0.959		0.963		0.945		-		0.945	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C74 / *Devel Simulation Tech*

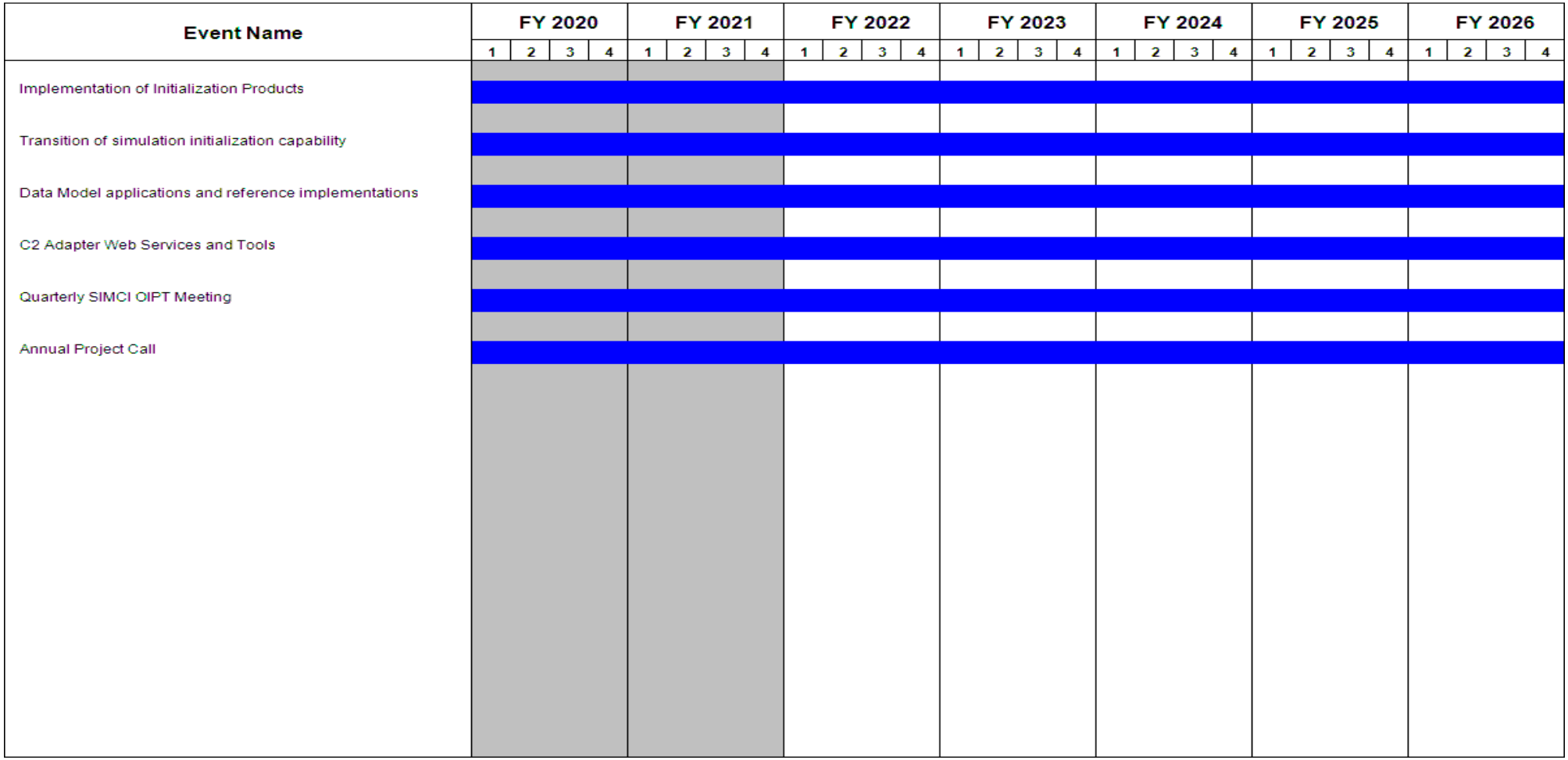

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C74 / *Devel Simulation Tech*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Implementation of Initialization Products	1	2010	4	2026
Transition of simulation initialization capability	1	2010	4	2026
Data Model applications and reference implementations	1	2010	4	2026
C2 Adapter Web Services and Tools	1	2010	4	2026
Quarterly SIMCI OIPT Meeting	1	2010	4	2026
Annual Project Call	1	2010	4	2026

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	Project (Number/Name) C77 / *Army Geospatial Data Master Plan*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
C77: *Army Geospatial Data Master Plan*	-	0.735	0.703	0.540	-	0.540	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This effort provides a geospatial/GEOINT standards-based framework that enables the management, dissemination, and update of 2D and 3D geospatial data and services within the Army Geospatial Enterprise (AGE) across Mission Command, Cross-Functional Team (CFT) initiatives, and with our National and UAP partners ensuring a common operational picture enhancing soldier situational awareness and increasing mission success. Establishes a geospatial enterprise architecture framed around geospatial standards that enable address geospatial/GEOINT data, services, and application interoperability from National to tactical as required by as Department of Defense Instruction (DoDI) 5000.56, AR 115-11 - Geospatial Information and Services, Geospatial Annex to COE IP, Net-Enabled Mission Command ICD, OMB-Circular A-119 and A-130, the FY17 NDAA (National Defense Authorization Act), section 875, 10 U.S. Code § 2223, Public Law 108-237, Standards Development Organization Advancement Action of 2004 and Public Law 108-113, National Technology Transfer and Advancement Act of 1995 and Public Law 82-436.

The Army Geospatial Enterprise (AGE) provides the geospatial foundation, consisting of accurate, robust, and timely 2D and 3D geospatial data, robust tools and services, in support of mission command, intelligence, training, mission-rehearsal and other mission-applications. It addresses the implementation and acceleration of Army modernization objectives focused on enhancing situational awareness to the warfighter.

Key lines of effort include Ground-Warfighter Geospatial Data Model (GGDM), development and maintenance of geospatial Standards, and integration with the Army Modelling and Simulation Enterprise. FY 2021 funding continues development efforts associated with the Ground-Warfighter Geospatial Data Model (GGDM) and integration with the Army Modelling and Simulation Enterprise.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: Ground-Warfighter Geospatial Data Model (GGDM)	0.130	0.130	0.110
Description: The GGDM incorporates common data elements that conform to standards mandated by the Department of Defense Information Technology Standards Registry (DISR) for the National System for Geospatial Intelligence (NSG). Incorporating common geospatial data standards into the GGDM makes the Programs of Record (POR) consistent with new DISR-mandated geospatial intelligence standards for the NSG. The implementation of GGDM across the Army increases system-interoperability at the geospatial data level.			
FY 2021 Plans: Initiate development of the next version of GGDM based upon new information and revisions to the National System for Geospatial-Intelligence (NSG) Application Schema (NAS) as well as new requires from the US Army, USMC, and ABCANZ Allies.			

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C77 / *Army Geospatial Data Master Plan*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Provide GGDM training classes to Army and USMC personnel. Ensure major Army PORs are implementing the GGDM (I.E. DCGS-A and SECORE). ***FY 2022 Plans:*** Initiate development of the next version of GGDM based upon revisions to the National System for Geospatial-Intelligence (NSG) Application Schema (NAS) as well as new requirements from the US Army, especially as result from HQDA EXORD 154-20 (Army 3D Geospatial Data Integration Strategy), USMC, and ABCANZ Allies. Provide GGDM training classes to Army and USMC personnel. Ensure major Army PORs are implementing the GGDM (I.E. DCGS-A and SECORE). ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease level of support to align with programmed funding.			
Title: Geospatial Data Standards ***Description:*** Army Geospatial Standards including data standards and standards for services to manage, process and disseminate and utilize geospatial data. Alignment of industry and Open geospatial standards from organizations such as the Open Geospatial Consortium (OGC) and others into the Army Geospatial Enterprise (AGE). ***FY 2021 Plans:*** Will initiate work in collaboration with industry and other agencies to develop new geospatial data and services standards, DOD Profiles of these standards, and technology implementations of these standards. Focus on standards to support 2D raster tiled maps, 3D globe standards, and initial assessment about vector tile maps. Additionally, cont. to develop modifications/ updates elevation data formats and services. Maintain Geospatial Standards compliance matrix, Std-V1, in alignment with quarterly updated NSG standards and DoD Information Technology Standards and Profile Registry (DISR) cycle updates of GeoINT standards and coordinate results with Army CIO/G6 and ASA(ALT) Programs. Will continue to provide SME support on geospatial data and technology standards to Army PORs. Utilize the AGDIMP resource to perform integration of multiple geospatial standards (both 2d and 3d). Specifically in support of extending the One World Terrain (OWT) capabilities into non-training like applications, such as mission planning, mission rehearsal, and Army operations. The integration of the geographic 2D world and the capabilities of the polygon based 3D world will provide the soldier with cutting-edge geospatial capabilities and over match moving forward. Increased support to Army Futures Command is anticipated to drive increased funding requirements starting in FY 2021 and an increase in programming starting in FY 2022. ***FY 2022 Plans:*** Will initiate work in collaboration with industry and other agencies to develop new geospatial data and services standards, DOD Profiles of these standards, and technology implementations of these standards. Focus on standards to support 2D raster tiled maps, 3D globe standards, and initial assessment about vector tile maps. Additionally, cont. to develop modifications/updates elevation data formats and services. Maintain Geospatial Standards compliance matrix, Std-V1, in alignment with	0.605	0.573	0.430

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C77 / *Army Geospatial Data Master Plan*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
quarterly updated NSG standards and DoD Information Technology Standards and Profile Registry (DISR) cycle updates of GEOINT standards and coordinate results with Army CIO/G6 and ASA(ALT) Programs. Will continue to provide SME support on geospatial data and technology standards to Army PORs. Utilize the AGDIMP resource to perform integration of multiple geospatial standards (both 2d and 3d). Specifically in support of extending the One World Terrain (OWT) capabilities into non-training-like applications, such as mission planning, mission rehearsal, and Army operations. The integration of the geographic 2D world and the capabilities of the polygon based 3D world will provide the soldier with cutting-edge geospatial capabilities and over match moving forward. Increased support to Army Futures Command is anticipated to drive increased funding requirements starting in FY 2021 and an increase in programming starting in FY 2022. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease level of support to align with programmed funding.			
Accomplishments/Planned Programs Subtotals	0.735	0.703	0.540

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Resources are allocated to several critical geospatial projects in support of the Army Geospatial Data Integrated Master Plan (AGDIMP) and the Army Geospatial Enterprise (AGE).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C77 / *Army Geospatial Data Master Plan*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FY 2020 SBIR/STTR Transfer	TBD	Various : Various	-	-		-		0.000		-		0.000	-	-	-
		Subtotal	-	-		-		0.000		-		0.000	-	-	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Army Geospatial Model and Data Standards	Various	TBD : TBD	7.043	0.735	Nov 2019	0.703	Nov 2020	0.540	Nov 2021	-		0.540	0.000	9.021	Continuing
		Subtotal	7.043	0.735		0.703		0.540		-		0.540	0.000	9.021	N/A

	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7.043	0.735		0.703		0.540		-		0.540	0.000	9.021	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C77 / *Army Geospatial Data Master Plan*

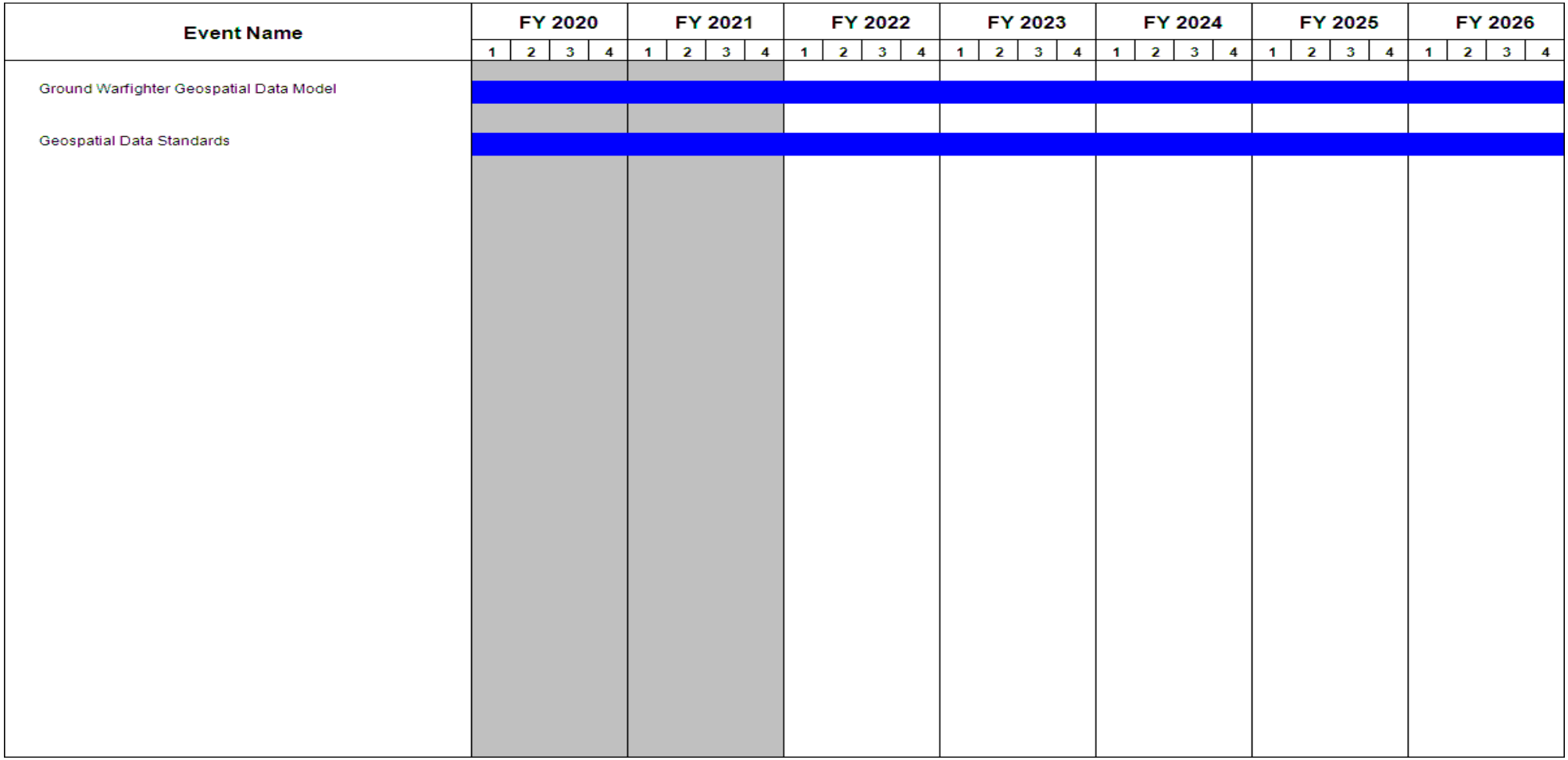

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C77 / *Army Geospatial Data Master Plan*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Ground Warfighter Geospatial Data Model	1	2010	4	2026
Geospatial Data Standards	1	2010	4	2026

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	Project (Number/Name) C78 / *One Semi-Automated Forces*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
C78: *One Semi-Automated Forces*	-	5.786	5.939	5.968	-	5.968	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

One Semi-Automated Forces (OneSAF) develops and delivers a software application that represents activities of units and forces in simulation to support Army Training and Readiness. The application is used by Army agencies to support the concept evaluation, experimentation, materiel acquisition and training throughout the communities. The focus of this project is systems/software engineering and design for development and evolution of the architecture and software tools for a universal system of Army computer-generated forces -- OneSAF. OneSAF is a high fidelity brigade-and-below SAF that represents a full range of operations, systems and control processes in support of stand-alone and embedded training and Research, Development and Acquisition (RDA) simulation applications. OneSAF is fully interoperable with the Army's emerging virtual, live, and division-and-above constructive simulations and provides next-generation simulation products. OneSAF replaces a variety of legacy simulations used within the Army to support Acquisition, Analysis, Experimentation, Intelligence, Test & Evaluation, and Training simulation activities.

FY 2022 base funding in the amount of $5.968 million allows for continued development of the software product line by addressing OneSAF Pre-Planned Product Improvements (P3Is) as prioritized and approved by the Training and Doctrine Command (TRADOC). This funding also provides for the management of the infrastructure, equipment, laboratories, and processes needed to develop, test, and release the required product baseline.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: Engineering and Manufacturing Development (EMD) phase contract activities for the One Semi-Automated Forces program.	4.518	4.589	4.618
Description: Continue EMD phase contract activities for the OneSAF program. ***FY 2021 Plans:*** Will continue the development of software capabilities based on OneSAF P3Is as prioritized and approved by TRADOC. Will continue the software development of functionality that enhances architectural services, components, synthetic environment and infrastructure of the OneSAF Product Line and will provide for software integration, test and release of required software refreshes and Version 10.0. ***FY 2022 Plans:*** Will continue the development of software capabilities based on OneSAF P3Is as prioritized and approved by TRADOC. Will continue the software development of functionality that enhances architectural services, components, synthetic environment and infrastructure of the OneSAF Product Line and will provide for software integration, test and release of required software refreshes and Version 11.0. ***FY 2021 to FY 2022 Increase/Decrease Statement:***			

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C78 / *One Semi-Automated Forces*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Increase from FY2021 to FY2022 funding is a result of incorporating additional P3I capabilities into OneSAF Software Baseline Version 11.0.			
Title: Government System Test and Evaluation for the One Semi-Automated Forces (OneSAF) program. ***Description:*** Government System Test and Evaluation for the OneSAF program. ***FY 2021 Plans:*** Will provide for the conducting of software, test, integration and release for Version 10.0. Will provide support to the user community in conducting experiments, analyses, and validation events for integration into the Home Station Training Federation, Network Integration Events (NIE), Battle Lab Collaborative Simulation Environment (BLCSE), Entity Simulation Service (ESS) in support of Joint Land Component Constructive Training Capability (JLCCTC), and other LVC applications. ***FY 2022 Plans:*** Will provide for the conducting of software, test, integration and release for Version 11.0. Will provide support to the user community in conducting experiments, analyses, and validation events for integration into the Home Station Training Federation, Network Integration Events (NIE), Battle Lab Collaborative Simulation Environment (BLCSE), Entity Simulation Service (ESS) in support of Joint Land Component Constructive Training Capability (JLCCTC), and other Live, Virtual and Constructive (LVC) applications.	1.009	1.050	1.050
Title: Government Program Management for the One Semi-Automated Forces (OneSAF) program. ***Description:*** Government Program Management for the One Semi-Automated Forces (OneSAF) program. ***FY 2021 Plans:*** Will provide a portion of program management, engineering and technical oversight, contract support, and travel for support of site surveys and Subject Matter Experts for the development of OneSAF. ***FY 2022 Plans:*** Will provide a portion of program management, engineering and technical oversight, contract support, and travel for support of site surveys and Subject Matter Experts for the development of OneSAF.	0.259	0.300	0.300
Accomplishments/Planned Programs Subtotals	5.786	5.939	5.968

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
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D. Acquisition Strategy

OneSAF continues to manage two Task Orders under one ID/IQ Production and Support contract. The Task Order for support includes Program Management; Development and Customer support; Training; Travel and ODCs. The Task Order for Production includes Capability P3I; Tailored Product Baseline Release; Capability Concurrence; and Integration, Test, and Release. The OneSAF Production and Support contract is tailored to fully serve the current and evolving needs of the user community.

The enhancements will be executed within the development line as modifications to the released baseline via Engineering Change Proposals (ECPs); Change Requests (CRs): Pre-Planned Product Improvements (P3I); and correction of deficiencies identified as Problem Test Reports (PTRs) and Deficiency Reports (DRs) by the user community.

In FY 2022, the program will continue with yearly releases of the OneSAF Software versions containing performance enhancements resulting from the development and integration of Pre-Planned Product Improvements (P3I), concurrency enhancements, user feedback, corrections of deficiencies identified as Problem Test Reports (PTR) and Deficiency Reports (DR) and Co-Developers handovers. The OneSAF program will continue to manage the single award contract for the continuing development and maintenance of the software baseline as well as continue to manage the Integrated Development Environment (IDE).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C78 / *One Semi-Automated Forces*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	PEO STRI, Orlando, FL : Various	28.882	0.330	Oct 2019	0.300	Oct 2020	0.300	Oct 2021	-		0.300	Continuing	Continuing	Continuing
SBIR/STTR	TBD	PEO STRI : Orlando, FL	0.460	-		-		-		-		-	0.000	0.460	-
FY 2020 SBIR/STTR Transfer	TBD	Various : Various	-	-		-		0.000		-		0.000	-	-	-
		Subtotal	29.342	0.330		0.300		0.300		-		0.300	Continuing	Continuing	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integration, Interoperability, and Support (I2S) & Logical Follow On (LFO)	C/CPFF	Cole Engineering Services, Inc. : Orlando, FL	7.290	-		-		-		-		-	Continuing	Continuing	Continuing
Software Development & Production Logical Follow On (LFO)	C/CPFF	Leidos : Orlando, FL	19.985	-		-		-		-		-	Continuing	Continuing	Continuing
Software Development	C/CPFF	Riptide : Orlando, FL	11.196	4.079	Dec 2019	4.164	Dec 2020	4.193	Dec 2021	-		4.193	Continuing	Continuing	Continuing
		Subtotal	38.471	4.079		4.164		4.193		-		4.193	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Analysis	Various	Various : Various	6.597	-		-		-		-		-	Continuing	Continuing	Continuing
Domain Analysis	Various	Various : Various	6.435	0.104	Dec 2019	0.125	Dec 2020	0.125	Dec 2021	-		0.125	Continuing	Continuing	Continuing
Integrated Development Environment	Various	Various : Various	9.936	-		-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army		Date: May 2021
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Architecture Engr & Tech Spt	SS/FP	MITRE FFRDC : Aberdeen Proving Ground, MD	6.059	0.264	Dec 2019	0.300	Dec 2020	0.300	Dec 2021	-		0.300	Continuing	Continuing	Continuing
		Subtotal	29.027	0.368		0.425		0.425		-		0.425	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
OneSAF integration, evaluation and test	Various	Various : Various	14.629	0.855	Dec 2019	0.875	Dec 2020	0.875	Dec 2021	-		0.875	Continuing	Continuing	Continuing
OneSAF Verification, Validation & Accreditation	Various	Various : Various	7.647	0.154	Dec 2019	0.175	Dec 2020	0.175	Dec 2021	-		0.175	Continuing	Continuing	Continuing
		Subtotal	22.276	1.009		1.050		1.050		-		1.050	Continuing	Continuing	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	119.116	5.786		5.939		5.968		-		5.968	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C78 / *One Semi-Automated Forces*

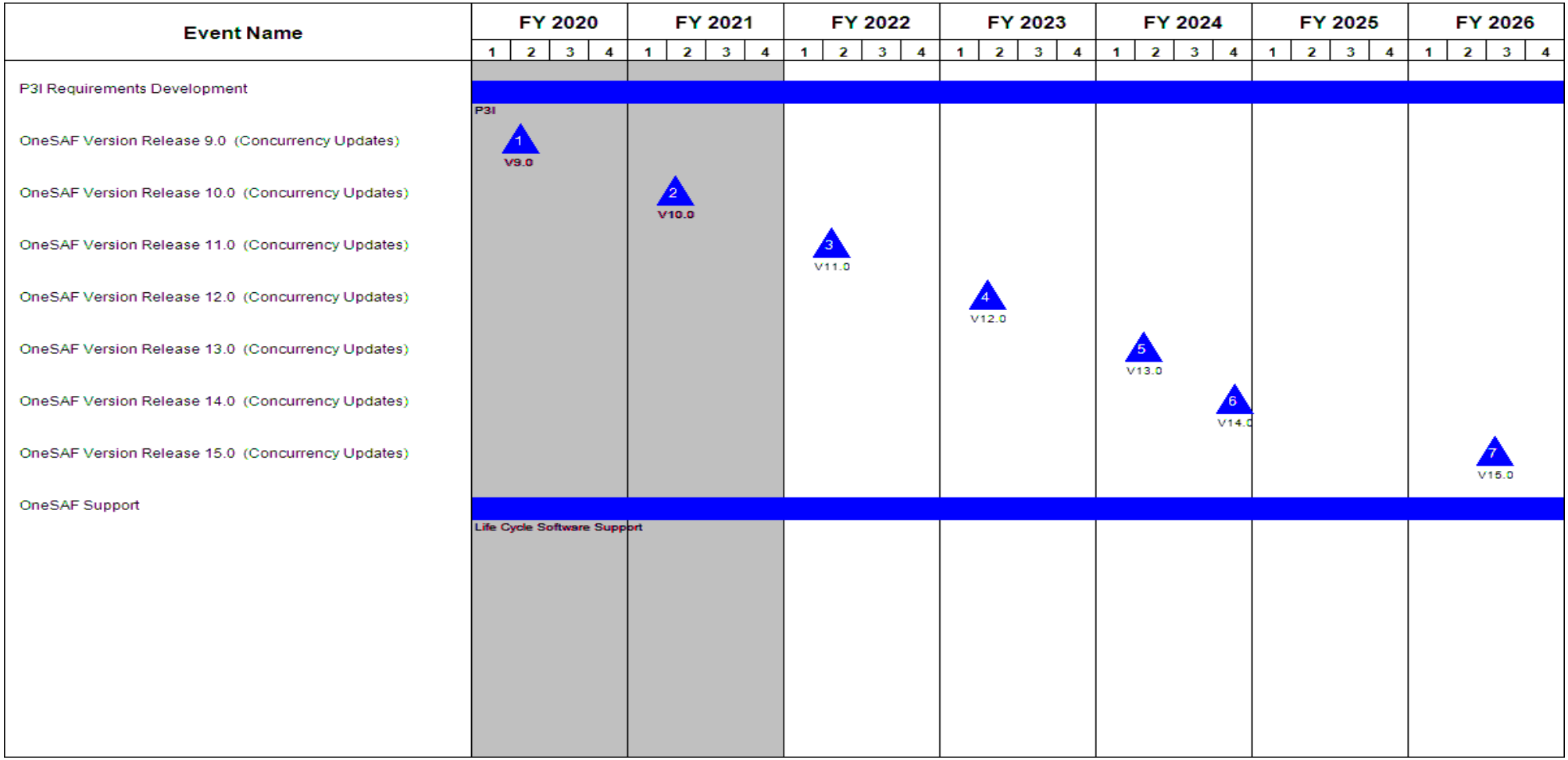

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604760A / *Distributive Interactive Simulations (DIS) - Eng Dev*	**Project (Number/Name)** C78 / *One Semi-Automated Forces*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
P3I Requirements Development	1	2006	4	2026
OneSAF Version Release 9.0 (Concurrency Updates)	2	2020	2	2020
OneSAF Version Release 10.0 (Concurrency Updates)	2	2021	2	2021
OneSAF Version Release 11.0 (Concurrency Updates)	2	2022	2	2022
OneSAF Version Release 12.0 (Concurrency Updates)	2	2023	2	2023
OneSAF Version Release 13.0 (Concurrency Updates)	2	2024	2	2024
OneSAF Version Release 14.0 (Concurrency Updates)	4	2024	4	2024
OneSAF Version Release 15.0 (Concurrency Updates)	3	2026	3	2026
OneSAF Support	1	2006	4	2026