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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0308601N / <i>Modeling & Simulation Support</i>
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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	51.716	11.672	8.683	9.772	-	9.772	-	-	-	-	-	-
2222: <i>Modeling & Simulation</i>	51.716	6.845	8.683	9.772	-	9.772	-	-	-	-	-	-
9999: <i>Congressional Adds</i>	0.000	4.827	0.000	0.000	-	0.000	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

This Program Element addresses technical and management initiatives directed by Congress, Department of Defense (DoD), Secretary of the Navy (SECNAV), and Chief of Naval Operations (CNO) with the aim of bringing organization, focus, and efficiency to the development and use of M&S throughout the Navy and DoD. It funds efforts to define and coordinate the corporate Navy M&S policy, M&S execution, and guidance to evolve an interoperable and reusable core M&S capability consistent with the M&S technical framework prescribed by DoD across the FYDP.

DoN M&S priorities include Systems Engineering and Integration, Model Based Systems Engineering (MBSE), and Interoperability and Requirements Development to determine the required networks, infrastructure, and data needed to support enterprise DoN M&S capabilities which also leverage Automated Test and Re-Test (ATRT), Modular Open Systems Architecture (MOSA), Model-Based Systems Engineering (MBSE), and other related technologies.

Efforts are organized around three product areas:

(1) Core Services: This activity provides essential planning, coordination, and execution of Naval M&S efforts with other Services, the Office of Secretary of Defense (OSD), the Joint Staff, and other agencies that includes policies and procedures necessary for M&S standards, visibility, and potential reuse across DoD.

(2) Community Services: This activity provides M&S subject matter expert support embedded in the Navy M&S Communities to recommend implementations for M&S policies, standards, VV&A, and reuse within their Community and to ensure that the wider DON and DoD are aware (visibility) of the M&S products and services, initiatives, processes, and standards.

(3) Community Experiments and Prototypes: This activity conducts experiments and prototypes aimed at determining the feasibility and applicability of proposed standards or technical approaches to Navy M&S and investigates Service-unique requirements for standards or guidance to achieve M&S efficiencies.

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B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	12.119	8.683	9.967	-	9.967
Current President's Budget	11.672	8.683	9.772	-	9.772
Total Adjustments	-0.447	0.000	-0.195	-	-0.195
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.447	0.000			
• Rate/Misc Adjustments	0.000	0.000	-0.195	-	-0.195

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

Project: 9999: *Congressional Adds*

Congressional Add: *Joint simulation environment*

	FY 2020	FY 2021
Congressional Add Subtotals for Project: 9999	4.827	0.000
Congressional Add Totals for all Projects	4.827	0.000

Change Summary Explanation

FINANCIAL: No significant change.

TECHNICAL: Mission Description, Budget Item Justifications and accomplishments/program plan descriptions updated to better show synchronization of Project 2222 activities in support of Project Overmatch and digital warfighting transformation objectives.

SCHEDULE: Activities and milestones clarified to better show synchronization of Projects 2222 activities and deliverables in support of Project Overmatch and digital warfighting transformation objectives.

Major Milestones - Project 2222:

The overall schedule for project 2222 is linked to the Project Overmatch schedule which is held at a higher classification. The project anticipates a major milestone as a Live, Virtual, Constructive (LVC) Test in Q1 FY22 for the Increment 1 Minimum Viable Product.

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0308601N / Modeling & Simulation Support	Project (Number/Name) 2222 / Modeling & Simulation
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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
2222: Modeling & Simulation	51.716	6.845	8.683	9.772	-	9.772	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

This project addresses technical and management initiatives directed by Congress, Department of Defense (DoD), Secretary of the Navy (SECNAV), and Chief of Naval Operations (CNO) with the aim of bringing organization, focus, and efficiency to the development and use of M&S throughout the Navy and DoD. It funds efforts to define and coordinate the corporate Navy M&S policy, M&S execution, and guidance to evolve an interoperable and reusable core M&S capability consistent with the M&S technical framework prescribed by DoD across the FYDP.

DoN M&S priorities include Systems Engineering and Integration, Model Based Systems Engineering (MBSE), and Interoperability and Requirements Development to determine the required networks, infrastructure, and data needed to support enterprise DoN M&S capabilities which also leverage Automated Test and Re-Test (ATRTR), Modular Open Systems Architecture (MOSA), Model-Based Systems Engineering (MBSE), and other related technologies.

Efforts are organized around three product areas:

- (1) Core Services: This activity provides essential planning, coordination, and execution of Naval M&S efforts with other Services, the Office of Secretary of Defense (OSD), the Joint Staff, and other agencies that includes policies and procedures necessary for M&S standards, visibility, and potential reuse across DoD.
- (2) Community Services: This activity provides M&S subject matter expert support embedded in the Navy M&S Communities to recommend implementations for M&S policies, standards, VV&A, and reuse within their Community and to ensure that the wider DON and DoD are aware (visibility) of the M&S products and services, initiatives, processes, and standards.
- (3) Community Experiments and Prototypes: This activity conducts experiments and prototypes aimed at determining the feasibility and applicability of proposed standards or technical approaches to Navy M&S and investigates Service-unique requirements for standards or guidance to achieve M&S efficiencies.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: CORE SERVICES	1.035	1.035	1.126	0.000	1.126
Articles:	-	-	-	-	-
Description: This activity provides essential planning, execution, and coordination of core Navy M&S efforts with other Services, the Office of Secretary of Defense (OSD), the Joint Staff, and other agencies to execute core M&S activities and develop policies and procedures necessary for M&S visibility and potential reuse across					

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Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0308601N / <i>Modeling & Simulation Support</i>	Project (Number/Name) 2222 / <i>Modeling & Simulation</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>DoD. This activity supports development of common services, tools, and databases to ensure the integration and connectivity of Navy M&S products employed in Naval assessments, training, acquisition, and operational communities. It manages and maintains the Navy M&S Information Service (NMSIS), the central Naval M&S information resource to support informed M&S investment decision making across DON. It implements and manages the Modeling and Simulation (M&S) Quality Assurance (VV&A) process and integration with Navy DevSecOps and the Fleet demonstration environment and includes management of the Navy M&S website, M&S Master Plan, and M&S Investment Strategy updates and maintenance.</p> <p>FY 2021 Plans:</p> <ul style="list-style-type: none"> - Develop M&S strategies to support the Digital Warfighting Platform (DWP), Digital Warfighting Applications (DWA), and Digital Warfighting Design (DWD) across multiple domains and priorities that include electronic warfare capability, Minotaur Family of Systems (MFoS) integration and enhanced Command and Control (C2)/Battle Management Aid (BMA) and AI/ML capabilities in support of the priority mission thread(s). Additional M&S activities for integration of networking capabilities (components of future Naval Tactical Grid (NTG)). - Integrate M&S into the Naval Operational Architecture (NOA) Model with integrated metrics, models, design, and system-of-system requirements in support of the future warfighting in support of the priority mission thread(s). <p>FY 2022 Base Plans:</p> <ul style="list-style-type: none"> - Continue to promote consistent application of M&S "Best Practices" and associated technologies to improve support across the DON Enterprise. - Develop and sustain core M&S tools, architecture, performance metrics, and models supporting cross-domain kill-chain-level analysis at a systems of systems level. - Leverage cloud technologies, Automated Test/Re-Test (ATRT), data pipelining efforts, AI/ML, and Modular Open Software Architecture (MOSA) capabilities to scale Navy M&S capabilities in support of Project Overmatch 					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
and digital warfighting engineering transformation for the Naval Operational Architecture (NOA) and Naval Tactical Grid (NTG). FY 2022 OCO Plans: N/A FY 2021 to FY 2022 Increase/Decrease Statement: No significant change from FY 2021 to FY 2022.					
Title: COMMUNITY SERVICES Description: This activity provides M&S subject matter expert support embedded in the Navy M&S Communities to recommend implementations for M&S policies and standards within their Communities to ensure that the wider DON is aware of the M&S products and services, initiatives, processes, and standards (visibility). It promotes M&S reuse through cooperative Community M&S activities which identify and prioritize M&S capability requirements between and across Communities for mission-specific capabilities. This coordination includes the leveraging of Automated Test/Re-Test (ATRT) capabilities, Model-Based Systems Engineering (MBSE), and an Integrated Modeling Environment within a broad Navy Modular Open Services Architecture (MOSA) strategy. FY 2021 Plans: - Continue Modular Open Systems Architecture capabilities into the Navy's Digital Warfighting Platform (DWP), with associated policy changes and standards development to bring about ease of integration, interoperability and digital transformation across the naval capability development and modernization landscape (e.g. Programs of Record). - Continue the development of the Integrated Model Environment (IME), with associated open standards and policy guidance, to develop digital twins and drive the transformation to a digital Navy. - Train and educate workforce in efficient use of Live-Virtual-Constructive environments and VV&A of large-scale complex simulations FY 2022 Base Plans:	1.700	2.059	2.330	0.000	2.330
Articles:	-	-	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>- Initiate M&S requirements and tools into a modular Open Systems Architecture with associated policy changes and standards development to bring about ease of integration, interoperability and digital transformation across the naval capability development and modernization landscape (e.g. Programs of Record).</p> <p>- Initial integration with M&S into the Integrated Model Environment (IME), with associated open standards and policy guidance.</p> <p>- Conduct Fleet demonstrations of the Naval Operational Architecture (NOA) to validate performance metrics, models, design, and system-of-system requirements in support of Communications as a Service (CaaS) with the Naval Tactical Grid (NTG).</p> <p>- Enable the open standards and interfaces for the ATRT tool suite for automated test and analysis expansion through third party tools and capabilities.</p> <p>FY 2022 Base Plans:</p> <p>- Expand and develop M&S tools, policy and processes, and Live/Virtual/Constructive laboratory infrastructure to allow the secure exchange of data enabling the effective development, modernization, and utilization of M&S Tools and Analytics.</p> <p>- Continue and expand upon M&S development tool sets with open standards and interfaces to support priority mission thread(s), Battle Management/Mission Planning (BM/MP) Aids, Tactical Decision Aids (TDAs), Networking capabilities, and Command and Control capabilities.</p> <p>- Continue and expand integration with M&S via the Integrated Modeling Environment (IME), with associated open standards and policy guidance.</p>					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>- Conduct M&S Fleet experiments and prototype events and generation of validated performance metrics, models, design, and system-of-system requirements in support of Communications as a Service (CaaS) with the Naval Tactical Grid (NTG) and other enterprise mission areas.</p> <p>- Advance and efficiently integrate leading edge M&S capabilities in response to complex emerging threats and future warfighting environments.</p> <p>FY 2022 OCO Plans: N/A</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: The funding increase from FY 2021 to FY 2022 is due to the increased investment requirement for continuing to expand integration of M&S requirements and conducting M&S Fleet experiments and prototype events focused on the Naval Operational Architecture (NOA).</p>					
Accomplishments/Planned Programs Subtotals	6.845	8.683	9.772	0.000	9.772

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022 Base</u>	<u>FY 2022 OCO</u>	<u>FY 2022 Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• RDTEN/0307577N: <i>Intelligence Mission Data (IMD)</i>	0.000	0.000	0.907	-	0.907	-	-	-	-	-	-
• RDTEN/0604027N: <i>Digital Warfare</i>	35.551	35.480	46.769	-	46.769	-	-	-	-	-	-
• RDTEN/0603382N/0324: <i>Adv Combat System Technology</i>	1.728	1.299	1.566	-	1.566	-	-	-	-	-	-
• RDTEN/0603597N: <i>Automated Test & Analysis</i>	41.412	34.766	7.805	-	7.805	-	-	-	-	-	-
• OMN/4B3N: <i>Acquisition, Logistics, and Oversight</i>	1.512	5.316	6.342	-	6.342	-	-	-	-	-	-

Remarks
This effort synergizes with and leverages/supports other funded efforts including Intelligence Mission Data (IMD) (RDTEN/PE 0307577N), Digital Warfare (RDTEN/PE 0604027N), Advanced Combat Systems Tech (RDTEN/PE 0603382N/Proj 0324), Automated Test & Re-Test (RDTEN/PE 0603597N) and Modeling & Simulation Support (OMN/4B3N) to support Project Overmatch and warfighting digital transformation efforts.

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D. Acquisition Strategy

This is a non-ACAT program. The focus of the Navy Modeling and Simulation (M&S) efforts is to facilitate and enable the efficient use of M&S by minimizing duplication of M&S efforts and maximize the reuse of M&S and data. The Navy's Enterprise M&S is being extended and scaled for applicability across the Department of the Navy to enable open, affordable and rapid integrated M&S capability development.

This effort synergizes with and leverages / supports other funded efforts including Automated Test & Re-Test (PE 0603597N), Digital Warfare (PE 0604027N), Advanced Combat Systems Tech (PE 0603382N), and Intelligence Mission Data (IMD) (PE 0307577N) to support Project Overmatch and warfighting digital transformation efforts.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0308601N / Modeling & Simulation Support	Project (Number/Name) 2222 / Modeling & Simulation
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Infrastructures, integration and testing	Various	Various : Various	9.480	3.064	Nov 2019	0.000		0.000		-		0.000	-	-	-
Analysis, policies, plans interoperability	Various	Various : Various	16.447	1.178	Nov 2019	0.000		0.000		-		0.000	-	-	-
User interfaces, modeling modules, tactical software	Various	Various : Various	1.967	0.472	Mar 2020	0.000		0.000		-		0.000	-	-	-
DWP-T - SYSCOMS	Various	Various : Various	0.000	0.000		0.937	Nov 2020	1.001	Nov 2021	-		1.001	-	-	-
DWP-T - Warfare Centers	WR	Various : Various	0.000	0.000		0.832	Dec 2020	0.875	Nov 2021	-		0.875	-	-	-
DWP-T - Other, Govt	Various	Various : Various	0.000	0.000		0.312	Mar 2021	0.338	Mar 2022	-		0.338	-	-	-
Digital Warfare Design (DWD) - SYSCOMS	Various	Various : Various	0.000	0.000		0.934	Nov 2020	1.008	Nov 2021	-		1.008	-	-	-
Digital Warfare Design (DWD) - Warfare Centers	WR	Various : Various	0.000	0.000		0.830	Nov 2020	0.936	Nov 2021	-		0.936	-	-	-
Digital Warfare Design (DWD) - Other, Govt	Various	Various : Various	0.000	0.000		0.312	Mar 2021	0.350	Mar 2022	-		0.350	-	-	-
Digital Warfare Applications (DWA) - SYSCOMS	Various	Various : Various	0.000	0.000		0.934	Nov 2020	1.049	Nov 2021	-		1.049	-	-	-
Digital Warfare Applications (DWA) - Warfare Centers	WR	Various : Various	0.000	0.000		0.830	Dec 2020	0.935	Nov 2021	-		0.935	-	-	-
Digital Warfare Applications (DWA) - Other, Govt	Various	Various : Various	0.000	0.000		0.312	Mar 2021	0.350	Mar 2022	-		0.350	-	-	-
Subtotal			27.894	4.714		6.233		6.842		-		6.842	-	-	N/A

Remarks
 The increase of \$609K from FY 2021 to FY2022 is required to support M&S enterprise capabilities scaling that supports delivery of Project Overmatch and digital warfighting transformation priorities for the Naval Operational Architecture (NOA) and Naval Tactical Grid (NTG).

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy **Date:** May 2021

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Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Infrastructures, integration and testing	Various	Various : Various	6.115	1.190	Nov 2019	0.000		0.000		-		0.000	-	-	-
Analysis, policies, plans interoperability	Various	Various : Various	2.313	0.457	Nov 2019	0.000		0.000		-		0.000	-	-	-
User interfaces, modeling modules, tactical software	Various	Various : Various	0.925	0.184	Mar 2020	0.000		0.000		-		0.000	-	-	-
Digital Warfare Platform (DWP) - SYSCOMS	Various	Various : Various	0.000	0.000		0.240	Nov 2020	0.255	Nov 2021	-		0.255	-	-	-
Digital Warfare Platform (DWP) - Warfare Centers	WR	Various : Various	0.000	0.000		0.214	Dec 2020	0.227	Dec 2021	-		0.227	-	-	-
Digital Warfare Platform (DWP) - Other, Govt	Various	Various : Various	0.000	0.000		0.080	Mar 2021	0.085	Mar 2022	-		0.085	-	-	-
Digital Warfare Design (DWD) - SYSCOMS	Various	Various : Various	0.000	0.000		0.240	Nov 2020	0.255	Nov 2021	-		0.255	-	-	-
Digital Warfare Design (DWD) - Warfare Centers	WR	Various : Various	0.000	0.000		0.214	Dec 2020	0.226	Dec 2021	-		0.226	-	-	-
Digital Warfare Design (DWD) - Other, Govt	Various	Various : Various	0.000	0.000		0.080	Mar 2021	0.085	Mar 2022	-		0.085	-	-	-
Digital Warfare Applications (DWA) - SYSCOMS	Various	Various : Various	0.000	0.000		0.240	Nov 2020	0.256	Nov 2021	-		0.256	-	-	-
Digital Warfare Applications (DWA) - Warfare Centers	WR	Various : Various	0.000	0.000		0.212	Dec 2020	0.226	Dec 2021	-		0.226	-	-	-
Digital Warfare Applications (DWA) - Other, Govt	Various	Various : Various	0.000	0.000		0.080	Mar 2021	0.085	Mar 2022	-		0.085	-	-	-
Subtotal			9.353	1.831		1.600		1.700		-		1.700	-	-	N/A

Remarks
The increase of \$100K from FY 2021 to FY2022 is required to support M&S enterprise capabilities scaling that supports delivery of Project Overmatch and digital warfighting transformation priorities for the Naval Operational Architecture (NOA) and Naval Tactical Grid (NTG).

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Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Infrastructures, integration and testing	Various	Various : Various	9.440	0.300	Dec 2019	0.000		0.000		-		0.000	-	-	-
Analysis, policies, plans interoperability	Various	Various : Various	3.592	0.000		0.000		0.000		-		0.000	-	-	-
User interfaces, modeling modules, tactical software	Various	Various : Various	1.437	0.000		0.000		0.000		-		0.000	-	-	-
Digital Warfare Platform (DWP) - SYSCOMS	Various	Various : Various	0.000	0.000		0.130	Nov 2020	0.178	Nov 2021	-		0.178	-	-	-
Digital Warfare Platform (DWP) - Warfare Centers	WR	Various : Various	0.000	0.000		0.104	Dec 2020	0.167	Mar 2022	-		0.167	-	-	-
Digital Warfare Platform (DWP) - Other, Govt	Various	Various : Various	0.000	0.000		0.050	Mar 2021	0.063	Dec 2021	-		0.063	-	-	-
Digital Warfare Design (DWD) - SYSCOMS	Various	Various : Various	0.000	0.000		0.130	Nov 2020	0.177	Mar 2022	-		0.177	-	-	-
Digital Warfare Design (DWD) - Warfare Centers	WR	Various : Various	0.000	0.000		0.104	Dec 2020	0.166	Nov 2021	-		0.166	-	-	-
Digital Warfare Design (DWD) - Other, Govt	Various	Various : Various	0.000	0.000		0.050	Mar 2021	0.063	Dec 2021	-		0.063	-	-	-
Digital Warfare Applications (DWA) - SYSCOMS	Various	Various : Various	0.000	0.000		0.130	Nov 2020	0.188	Dec 2021	-		0.188	-	-	-
Digital Warfare Applications (DWA) - Warfare Centers	WR	Various : Various	0.000	0.000		0.102	Dec 2020	0.166	Nov 2021	-		0.166	-	-	-
Digital Warfare Applications (DWA) - Other, Govt	Various	Various : Various	0.000	0.000		0.050	Mar 2021	0.062	Mar 2022	-		0.062	-	-	-
Subtotal			14.469	0.300		0.850		1.230		-		1.230	-	-	N/A

Remarks
The increase of \$380K from FY 2021 to FY2022 is required to support M&S enterprise capabilities scaling that supports delivery of Project Overmatch and digital warfighting transformation priorities for the Naval Operational Architecture (NOA) and Naval Tactical Grid (NTG).

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	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	51.716	6.845	8.683	9.772	-	9.772	-	-	N/A		

Remarks
 The increase of \$1.089M from FY 2021 to FY2022 is required to support M&S enterprise capabilities scaling that supports delivery of Project Overmatch and digital warfighting transformation priorities for the Naval Operational Architecture (NOA) and Naval Tactical Grid (NTG).

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy **Date:** May 2021

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Fiscal Year	2020				2021				2022			
	1	2	3	4	1	2	3	4	1	2	3	4
	PROJECT OVERMATCH											
Increment 1 Minimum Viable Product (MVP)												
Development & Integration												
Platform Integration & Test												
Operate & Sustain												
Increment 2												
Development & Integration												
Platform Integration & Test												
Operate & Sustain												

LVC
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Note: Specifics have been removed due to Classified nature of the Project

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0308601N / <i>Modeling & Simulation Support</i>	Project (Number/Name) 2222 / <i>Modeling & Simulation</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2222				
Increment 1 Minimum Viable Product: Development & Integration	1	2021	4	2022
Increment 1 Minimum Viable Product: Development and Integration: Live, Virtual, and Constructive Test Event	1	2022	1	2022
Increment 1 Minimum Viable Product: Platform Integration & Test	1	2022	4	2022
Increment 2: Development & Integration	1	2022	4	2022

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0308601N / Modeling & Simulation Support				Project (Number/Name) 9999 / Congressional Adds			
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
9999: Congressional Adds	0.000	4.827	0.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Congressional Interest Item not included in other projects.

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

	FY 2020	FY 2021
Congressional Add: Joint simulation environment	4.827	0.000
FY 2020 Accomplishments: N/A		
FY 2021 Plans: N/A		
Congressional Adds Subtotals	4.827	0.000

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

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0308601N / Modeling & Simulation Support	Project (Number/Name) 9999 / Congressional Add
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Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Joint Simulation Environment (JSE)	C/CPFF	AMEWAS, Inc : California, MD	0.000	3.841	Apr 2020	0.000		0.000		-		0.000	-	-	-
Joint Simulation Environment (JSE)	C/CPFF	NAWC AD : Patuxent River, MD	0.000	0.986	Apr 2020	0.000		0.000		-		0.000	-	-	-
Subtotal			0.000	4.827		0.000		0.000		-		0.000	-	-	N/A

Remarks
American Electronic Warfare Associates - AMEWAS

	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	0.000	4.827	0.000	0.000	-	0.000	-	-	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy **Date: May 2021**

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0308601N / Modeling & Simulation Support	Project (Number/Name) 9999 / Congressional Adds
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Proj 9999	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Improvements to Threat Model Integration																												
Improvements to Battlespace Environments																												
Improvements and standardization of M&S Integration																												
Integration Architecture Management Integration Environment (AMIE)	NGTS MS 1 ◆	NGTS MS 2 ◆	ONI MS ◆																									
			AMIE MS ◆																									
			Prototype MS ◆																									
			Report MS ◆																									

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0308601N / <i>Modeling & Simulation Support</i>	Project (Number/Name) 9999 / <i>Congressional Adds</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 9999				
Improvements to Threat Model Integration: Improvements to Threat Model Integration	1	2020	3	2021
Improvements to Battlespace Environments: Improvements to Battlespace Environments	1	2020	3	2021
Improvements and standardization of M&S Integration: Improvements and standardization of M&S Integration	1	2020	4	2021
Integration Architecture Management Integration Environment (AMIE): Office of Naval Intelligence Model Fidelity Analysis	4	2020	4	2020
Integration Architecture Management Integration Environment (AMIE): Next Generation Threat Simulation V 3.2.4	2	2020	2	2020
Integration Architecture Management Integration Environment (AMIE): Next Generation Threat Simulation V 3.2.5	3	2020	3	2020
Integration Architecture Management Integration Environment (AMIE): Architecture Management Integration Environment (AMIE) v. 2.0	4	2020	4	2020
Integration Architecture Management Integration Environment (AMIE): Battle Monitor Prototype	4	2020	4	2020
Integration Architecture Management Integration Environment (AMIE): Analysis Report	4	2020	4	2020
Integration Architecture Management Integration Environment (AMIE): Integration Architecture Management Integration Environment (AMIE)	1	2020	4	2021