Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Navy											Date: April 2022	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604234N *I Advanced Hawkeye*							
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	5,652.598	268.681	348.360	502.956	-	502.956	459.352	264.338	249.611	228.064	337.629	8,311.589
3051: *E-2D Adv Hawkeye*	5,601.894	255.166	328.360	502.956	-	502.956	459.352	264.338	249.611	228.064	337.629	8,227.370
9999: *Congressional Adds*	50.704	13.515	20.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	84.219
Program MDAP/MAIS Code: **Project MDAP/MAIS Code(s):** 364												

A. Mission Description and Budget Item Justification

The E-2D Advanced Hawkeye (AHE) program provides the Navy with a carrier-based airborne command and control platform, which is equipped with the APY-9 radar system, multiple communications systems for data and voice, and additional sensor systems. All of these systems are integrated into the aircraft via a computing infrastructure that is highly automated, which enables a highly trained crew of just 5 aviators to conduct battle management that would otherwise require several dozen personnel at multiple locations.

E-2D provides Theater Air and Missile Defense (TAMD) today, and is critical for establishing the long-range kill chains of Naval Integrated Fires Control (NIFC) necessary to defeat the threats of our peer adversaries. Work has begun on upgrading the 25-year old computing architecture of the AHE that will allow the Navy to lead the Joint All Domain Command and Control (JADC2) efforts in any theater.

As production of the airplane winds down (final airframe procurement is scheduled for FY23), the threat continues to increase in both capability and capacity. The E-2D Research, Development, Test and Evaluation budget reflects the Navy's investment into the E-2D to ensure that the US maintains a tactical advantage over any adversary.
Efforts initiated in recent years ensure that the E-2D can outpace the threat, and include upgrades to the air vehicle, mission systems, datalinks, and sensors. The program integrates and tests these new capabilities, and provides Fleet concurrent training equipment upgrades. Subsequent to successful testing, new capabilities are delivered on a regularly scheduled basis, and are put together as a Delta System/Software Configuration (DSSC) package to ensure commonality and configuration control across the Fleet.

In FY23, among the other E-2D mission systems R&D efforts, there are 2 major initiatives that will ensure that the E-2D is ready & relevant into the coming decades. First, obsolete and failing components of the 15-year old cockpit design are being addressed by HECTR (Hawkeye Cockpit Technical Refresh), which ensures a higher safety margin for carrier landings after 8-hour sorties, and will substantially decrease sustainment costs over the lifecycle of the airplane. Second is TCID (Theater Combat Identification), which includes the upgrades to the 25-year old computing infrastructure mentioned above. TCID will bring Multi-Level Security and Cross-Domain solutions through an Open Mission System (OMS) Architecture. TCID is the key to establishing the CNO's vision for the Naval Operational Architecture and the Joint Chiefs' vision for JADC2. HECTR and TCID are planned for DSSC-6, FY27 delivery.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Navy	Date: April 2022
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604234N *I Advanced Hawkeye*

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it includes those projects that have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirement prior to full-rate production decision.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	275.813	386.860	0.000	-	0.000
Current President's Budget	268.681	348.360	502.956	-	502.956
Total Adjustments	-7.132	-38.500	502.956	-	502.956
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-58.500			
• Congressional Rescissions	-	-			
• Congressional Adds	-	20.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.071	0.000			
• SBIR/STTR Transfer	-7.061	0.000			
• Program Adjustments	0.000	0.000	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000
• Adjustments to Budget Year	-	-	502.956	-	502.956

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: 9999: *Congressional Adds*		
Congressional Add: *E-2D Hawkeye Advanced Radar*	13.515	0.000
Congressional Add: *Radar modernization and testing*	0.000	20.000
Congressional Add Subtotals for Project: 9999	13.515	20.000
Congressional Add Totals for all Projects	13.515	20.000

Change Summary Explanation

Technical: Not applicable.

The FY2023 funding request was reduced by $11.172 million to account for the availability of prior year execution balances.

Schedule: Not applicable.

FY 2023 funding increase reflects the fact that the FY 2022 President’s Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy											Date: April 2022	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604234N / *Advanced Hawkeye*				Project (Number/Name) 3051 / *E-2D Adv Hawkeye*			
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**
3051: *E-2D Adv Hawkeye*	5,601.894	255.166	328.360	502.956	-	502.956	459.352	264.338	249.611	228.064	337.629	8,227.370
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 364

A. Mission Description and Budget Item Justification

The DSSC build schedule is outlined below along with the capabilities that are planned to comprise each DSSC build.

DSSC-3.1 is comprised of the following capabilities:

1. Crypto Modernization/Frequency Remapping: The E-2D Multifunctional Information Distribution System/Joint Tactical Radio System (MIDS/JTRS) with concurrent Multi-netting will be integrated into the E-2D. This effort includes replacing the Multifunctional Information Distribution System-Low Volume Terminal (MIDS LVT) radio with MIDS/JTRS that has incorporated Link-16 concurrent Multi-netting (CMN-4) and replacing the JTIDS High Power Amplifier Group with a Link-16 High Power Amplifier which will address Crypto Modernization and Frequency Remapping.

2. Hybrid-Beyond Line of Sight(H-BLOS)SIPRChat will provide a Secret Internet Protocol Router Network (SIPRNet)Chat capability via INMARSAT.

DSSC-4 is planned for operational test and Fleet release in FY23. DSSC-4 provides critical capabilities needed to outpace the threat and enables components of NIFC increment 3. DSSC-4 is comprised of the following capabilities:

1. E-2D Navigation Warfare (NAVWAR) prevents loss of Global Positioning System (GPS) by using a Controlled Reception Pattern Antenna (CRPA) and antenna electronics (AE) unit which will function to provide GPS access in an Electronic Attack (EA) environment. NAVWAR significantly reduces the likelihood of loss of critical GPS Position, Navigation and Timing functionality that is fundamental to E-2D battlespace awareness and its contributions to multiple link networks. Without NAVWAR capability, the E-2D AHE will be unable to provide its services in GPS contested airspace, putting Navy units at unacceptable risk and hindering Joint operational flexibility. NAVWAR capability will allow the E-2D AHE to operate in areas where signal disruption and jamming would prohibit unprotected GPS reception. With this new capability, the E-2D AHE will be able to provide continuous operations in a degraded GPS environment for mission areas that depend on GPS for precise position, navigation, and timing.

2. The E-2D Multifunctional Information Distribution System/Joint Tactical Radio System (MIDS/JTRS)Tactical Targeting Networking Technology (TTNT) integrates Advanced Tactical Data Link functionality into the E-2D. This effort includes replacing the MIDS LVT radio with MIDS/JTRS that has incorporated Link-16 Concurrent Multi-Netting and TTNT. MIDS/JTRS TTNT is a key enabler for E-2D sensor netting capability in support of the NIFC mission. Conduct Communication-as-a-Service (CaaS) demonstration to support development of a solution for resilient communication paths of tactical information throughout the battlespace.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
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3. The fully integrated E-2D Secret Internet Protocol Router (SIPR) Chat capability will support integration of current collaboration tools including tactical "chat" (text) communications, real-time tasking, and Air Tasking Order distribution. Recent real world operations have demonstrated a migration of Command and Control communications from voice to Internet protocol based networks.

4. The E-2D DSSC-4 Counter Electronic Attack (CEA) capability will allow the E-2D radar system to maintain performance in a hostile electromagnetic interference environment. CEA will ensure continuous E-2D effectiveness is maintained in an Electronic Attack environment supporting the NIFC capability and overall Navy and Joint Integrated Air and Missile Defense strategy.

5. DSSC-4 NIFC will incorporate software improvements to implement capabilities and performance needed to meet partial NIFC increment 3 requirements. This improvement will specifically improve From the Sea (FTS) performance. Additional details are classified.

DSSC-5 is planned for operational test and Fleet release in FY25. DSSC-5 provides the capabilities necessary for E-2D to meet NIFC increment 3 requirements and is comprised of the following capabilities:

1. DSSC-5 E-2D Sensor Netting capabilities provides fusion of data from off-board sources via a high bandwidth network that will allow E-2D to support NIFC increment 3 requirements. Additional details are classified.

2. E-2D Data Fusion Improvements provides a fusion engine to blend on and off-board sensor derived track data (e.g. Electronic Surveillance, Satellite Receiver System data, Fighter to Fighter backlink data) with already blended radar, Identify Friend or Foe and Cooperative Engagement Capability track files, enhancing situational awareness and tactical decision making. Integrating Link-16 Network Participation Group 20 messages improves interoperability between E-2D and participating US Navy fighters, including 5th generation aircraft. This enhances the combat effectiveness of the E-2D, increases situational awareness and shortens kill-chain timeliness (including NIFC). Successful E-2D NIFC employment depends on a clear/unambiguous tactical picture.

3. The E-2D DSSC-5 Counter Electronic Attack (CEA) capability will allow the E-2D radar system to maintain performance in an advanced hostile intentional electromagnetic interference environment. CEA will ensure continuous E-2D effectiveness is maintained in an Electronic Attack environment supporting the NIFC capability and overall Navy and Joint Integrated Air and Missile Defense strategy.

4. E-2D Cooperative Engagement Capability (CEC) Signal Data Processor (SDP) provides processing capacity and cryptographic upgrades required to implement the NIFC capabilities integrated into DSSC 5. CEC utilizes the SDP to encrypt tactical data and control the antenna during transmission of the data. This capability will correct obsolescence deficiencies based on processors, encryption and capacity and establish the baseline architecture for expanded capability in CEC. The fully integrated E-2D Communication-as-a-Service (CaaS) will enhance CEC improvements to ensure resilient communication paths for tactical information throughout the battlespace. CEC Block II capabilities will ensure continued interoperability with the rest of the carrier strike group, and enable new CEC capabilities necessary to counter expected advances in threat capabilities. Additional CEC improvements will provide Communication-as-a-Service (CaaS) solutions for resilient communication paths of tactical information throughout the battlespace. Initial integration of CEC Block II capabilities must be conducted on time maintain interoperability and keep pace with expected threats.

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E-2D Stores Performance Assessment Requested Quality (SPARQ):

Due to budget constraints and reprioritization of efforts, E-2D Stores Performance Assessment Requested Quality (SPARQ) capabilities have been removed from the DSSC-5 build. These funds were reprioritized to higher development priorities. Capability to be incorporated in a future DSSC build.

DSSC-6 is planned for operational test and Fleet Release in FY27. DSSC-6 provides the capabilities necessary for E-2D to meet NIFC increment 3 requirements and is comprised of the following capabilities:

1. E-2D Hawkeye Cockpit Technical Refresh (HECTR) involves a redesign of critical components of the current E-2D Integrated Navigation Control and Display System (INCDS) driven by component obsolescence and fleet identified deficiencies. The effort includes the integration of these components with remaining cockpit hardware, integration of new software applications, and integration with TCID weapon system architecture. HECTR will also integrate a visual reference via a Helmet Mounted Display (HMD). HECTR will bring a Required Navigation Performance Area Navigation (RNP RNAV) capability to the E-2D platform, to improve reliability, to address current human machine interface (HMI) deficiencies and to address obsolescence of the current cockpit. All current functions of the INCDS will be included in the HECTR cockpit, to include unique non-navigation functions such as landing gear and gross take-off weight, which are currently housed in the Avionics Flight Management Computer. Additionally, new capability, such as a weather radar and traffic avoidance may be integrated.

2. Theater E-2D Combat Identification (TCID) including Mission Computer Display re-architecture enables the E-2D to distribute longer range and more accurate Combat Identification data to the Carrier Strike Group (CSG). E-2D will receive National Technical Means (NTM) and tactical TCID data at all security levels and filter/distribute at the highest possible security levels to the tactical edge. Using the Open Mission Systems (OMS) design, the new mission computer architecture will provide multi-level security and cyber hardening provisions to support current and planned capabilities. The OMS design will allow faster integration of these capabilities required to pace the evolving threat. The fully integrated E-2D Communication-as-a-Service (CaaS) will enhance TCID improvements to ensure resilient communication paths for tactical information throughout the battlespace.

3. The E-2D DSSC 6 Counter Electronic Attack (CEA) capability will allow the E-2D radar system to maintain performance in an advanced hostile electromagnetic interference environment. The E-2D CEA program will ensure continuous E-2D effectiveness is maintained in an Electronic Attack environment supporting the NIFC capability and overall Navy and Joint Integrated Air and Missile Defense strategy.

E-2D Survivability capabilities for the ALQ-217 ESM:

Due to budget constraints and reprioritization of efforts, E-2D Survivability capabilities for the ALQ-217 ESM capabilities have been removed from the DSSC-6 build. These funds were reprioritized to higher development priorities.

Aerial Refueling (AR) Capability:

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AR capability allows the E-2D AHE to receive fuel from various organic and non-organic tanker aircraft. It provides Expanded Battle Space Surveillance and Targeting through significantly enhanced persistence and increased flexibility (range & endurance). AR enables the E-2D AHE to fully support current Carrier Strike Group /Joint 24/7 Theater Operations by providing more versatile stationing and/or forward basing options. Previous E-2D testing established operational envelopes for KC-10, KC-135, KC-707, and F/A-18E/F aircraft under E-2 Squadrons, PE 0204152N. Future AR tanker testing will include qualification of KC-130, KC46, and MQ25.

ESM E-2D capabilities for the ALQ-217:

E-2D AN/ALQ-217 Electronic Support Measures (ESM) integrates digital receiver and processing technology. The ALQ-217B digital ADRP addresses all known and imminent obsolescence issues in ALQ-217B Receiver/Processor. The replacement incorporates technical solutions to meet current and future mandates to support mission needs against evolving threats.

Software Support Activity:

Software Support Activity provides system requirements and integration in software development environments and software integration labs to support the E-2D software and hardware configurations. This includes software development tools, test tools, and hardware benches.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Air Vehicle	11.407	14.023	25.148	0.000	25.148
Articles:	-	-	-	-	-
Description: E-2D Air Vehicle improvements include the development of solutions to improve safety, structural integrity, and systems reliability of the E-2D aircraft. Improvements include analysis and redesign of structural components and components to minimize excessive and premature wear, increase reliability, improve existing design deficiencies, and respond to Fleet urgent operational requirements. The improvements will address known, predicted, and emergent obsolescence equipment issues. These efforts include, but are not limited to Aerial Refueling (AR), Improved Landing Mode (ILM) capabilities, airframe, engine, and electrical component improvements, full scale fatigue testing, and technology upgrades. Future AR tanker testing will include qualification of KC-130, KC46, and MQ25. Funding also includes the flight/engine hours that are necessary for design, development, validation and verification.					
FY 2022 Plans: E-2D will continue improvement efforts to maintain aircraft readiness. The program will continue to address known, predicted, and emergent obsolescence equipment issues, continuing efforts from prior years. Continue Full Scale Fatigue Test to assure continued safe operation of the aircraft. The test program will continue towards the final goal of 20,000 test hours. Inspections and analysis will be performed at 500 effective flight hour					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
intervals. Repairs of the test article will be conducted as required. Continue AR capability envelope expansion efforts. ***FY 2023 Base Plans:*** E-2D will continue improvement efforts to maintain aircraft readiness. The program will continue to address known, predicted, and emergent obsolescence equipment issues, continuing efforts from prior years. Continue Full Scale Fatigue Test to assure continued safe operation of the aircraft. The test program will continue towards the final goal of 20,000 test hours. Inspections and analysis will be performed at 500 effective flight hour intervals. Repairs of the test article will be conducted, as required. Upon completion of the fatigue test article achieving 20,000 Effective Flight Hours (EFH), the test article will be disassembled and examined. The objectives is to identify fatigue critical locations and demonstrate that the E-2D aircraft structure satisfy the programs service life requirement. Continue AR capability envelope expansion efforts. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Air Vehicle FY22 to FY23 increase is provided for continued test and repair operations. The test article will be disassembled and examined. Additional funds provided for AR tanker qualifications. Also includes continuous AR capability envelope expansion efforts.					
Title: Mission Systems ***Articles:*** ***Description:*** E-2D Mission Systems improvements include development, integration, and testing of aircraft Mission Systems hardware/software updates and capability expansions to support aircraft avionics, displays, navigation, communication, electronic sensors, battle management, data fusion, system-of-systems, and countermeasure efforts. Efforts include continuous improvement of Mission Systems equipment and software in order to maintain mission availability for safe and reliable operations. Funding also includes development tools, test tools, and hardware benches in support of software environments and integration labs. Advanced system development and testing activities will address replacement components to address obsolescence, incorporate technical solutions to meet current and future mandates and standards, and incorporate improved technology to support evolving mission needs. Integration of Communication-as-a-Service (CaaS)to support future interoperability efforts. Studies and analyses will evaluate future capability expansions. Mission Systems efforts include, but are not limited to, Hawkeye Cockpit Technical Refresh (HECTR), improvements to/development of	113.693 -	133.329 -	261.235 -	0.000 -	261.235 -

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Communication Navigation and Identification Friend or Foe (CNI), Datalinks, Avionics, Mission System Software (MSS), Theater Combat Identification (TCID) mission computer, Naval Integrated Fire Control (NIFC), Data Fusion, Cooperative Engagement Capability (CEC) Signal Data Processor (SDP) Upgrade, battle management, technology upgrades, and emergent tactical requirements as they arise. ***FY 2022 Plans:*** Funds provided to complete integration DSSC-5 Sensor Netting solution. Continue DSSC-5 Data Fusion improvement efforts. Continue development efforts for HECTR. Continue development efforts for TCID. Continue DSSC-5 CEC and SDP software and hardware efforts. Systems engineering will support ongoing and emergent analysis and design/development/test efforts required to identify Engineering Change Proposal (ECP) requirements to respond to evolving and emergent threats, mission systems, communications systems, navigation equipment, and countermeasures. Evaluate future capability expansions via studies and analyses. ***FY 2023 Base Plans:*** Continue developmental efforts for DSSC-5 Sensor Netting solution. Complete DSSC-5 Data Fusion development efforts and begin integration. Continue development efforts and begin integration for HECTR. Continue development efforts for TCID, to include Mission computer and Display hardware, National Technical Means (NTM), Open Mission Systems (OMS) and Multi-level Security architecture. Continue development efforts for CaaS. Continue DSSC-5 CEC and SDP software and hardware efforts. Provide support of software development environments and integration labs required for E-2D software and hardware configurations. Systems engineering will support ongoing and emergent analysis and design/development/test efforts required to identify Engineering Change Proposal (ECP) requirements to respond to evolving and emergent threats, mission systems, communications systems, navigation equipment, and countermeasures. Evaluate future capability expansions via studies and analyses. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Mission Systems FY22 to FY23 increase is due to the upgrade & the ramp up of software and hardware efforts for HECTR,					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
TCID, CEC, SDP, and CaaS. HECTR replaces failing and obsolete components in the cockpit to include replacement of the Avionics Flight Management Computer (AFMC), which improves reliability and readiness, and will bring savings in sustainment over the lifetime of the program. HECTR also integrates a Helmet Mounted Display (HMD) and improved displays, which will mitigate pilot fatigue and safety concerns during carrier landings after longer Aerial Refueling missions. TCID directly enables the E-2D and the Joint Force to defend against the growing range and capabilities of adversaries, and will deliver interoperability with DoD's Joint All-Domain Command and Control (JADC2) framework. Without TCID in the E-2D, the Joint Force's air and missile defense will lag the emergent threat. CEC and SDP will provide processing and cryptographic upgrades for implementation of NIFC capabilities into DSSC 5, and will address obsolescence of current SDP hardware. CaaS integration will provide more robust networks capabilities for CEC and TCID. Provide software development tools, test tools, and hardware benches.					
Title: Datalinks	7.424	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: E-2D Datalinks distribute incoming information, giving the E-2D increased and expanded battlespace awareness. Combined with a two-generation leap in radar sensor capability, the network enabled capability enables the Advanced Hawkeye to deliver actionable data to joint forces, key to keeping net-centric carrier battle groups out of harm's way and reducing the time between initial awareness and active engagement. E-2D Datalinks improvements include development, integration, and testing of aircraft Network Datalink updates and capability expansions. Efforts include continuous design of Datalink equipment in order to maintain mission availability and safe and reliable operations. Advanced system development and testing activities will address replacement components to address obsolescence, incorporate technical solutions to meet current and future mandates and standards, and incorporate improved technology to support evolving mission needs. Studies and analyses will be performed to evaluate future capability expansions. Datalink efforts include, but are not limited to, improvements to/development of Multifunctional Information Distribution System/Joint Tactical Radio System (MIDS/JTRS), Secret Internet Protocol Router (SIPR) Chat capability, Crypto Modernization and Frequency Remapping (CM/FR), technology upgrades, and emergent tactical requirements as they arise.					
FY 2022 Plans: N/A					
FY 2023 Base Plans: N/A					
FY 2023 OCO Plans:					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
N/A					
Title: Sensors	24.812	49.033	35.104	0.000	35.104
Articles:	-	-	-	-	-

Description: E-2D Sensor Systems provide real-time situational awareness to Joint Force and Carrier Strike Group operations via active and passive detection capabilities. Sensor product upgrades provide real-time, on-scene improvements in the execution of early warning, battle management, and command and control missions. E-2D Sensor Systems improvements include development, integration, and testing of aircraft Sensor Systems hardware/software updates and capability expansions. Advanced system development and testing activities will address replacement components to address obsolescence, incorporate technical solutions to meet current and future mandates, and incorporate improved technology in of support mission needs against evolving threats. E-2D AN/ALQ-217 Electronic Support Measures (ESM) Theater Combat Identification (TCID) upgrade integrates digital receiver and processing technology, enabling the E-2D to locate, identify, and track current and future radars in combination with other ESM platforms across L-16 and Tactical Targeting Networking Technology (TTNT). The ESM upgrades bring increased processor capacity, sensor fidelity, and time accuracy. These capabilities will ensure the E-2D can perform its intended mission at locations required to support Naval and Joint force operations. Counter Electronic Attack (CEA) includes implementation of technologies developed by the Office of Naval Research. Studies and analyses will evaluate future capability expansions.

FY 2022 Plans:
Funds provided to perform CEA flight test and lab demonstrations for integration of capability into DSSC-4 through DSSC-6. Continue DSSC-6 development efforts for CEA capabilities. Complete development, testing, and deliver final AN/ALQ-217 ESM Combat Identification upgrades due to deprioritization efforts. Continuous ongoing and emergent analysis and design/development/test efforts required to identify ECP requirements to respond to evolving, emergent threats and countermeasures. Evaluate future capability expansions via studies and analyses.

FY 2023 Base Plans:
Funds provided to continue DSSC-6 development efforts for CEA. Finalize testing and delivery of AN/ALQ-217 ESM Combat Identification upgrades. Funds provided for continuous emergent analysis and design/development/test efforts required to identify ECP requirements to respond to evolving, emergent threats and countermeasures. Evaluate future capability expansions via studies and analyses.

FY 2023 OCO Plans:

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Sensors FY22 to FY23 decrease is due to the finalization efforts of the AN/ALQ-217 ESM Combat Identification upgrades.					
Title: Integration, Test, and Training	97.830	131.975	181.469	0.000	181.469
Articles:	-	-	-	-	-
Description: Funds the necessary E-2D integration, testing, and Fleet training equipment upgrades required to improve the E-2D weapon system capabilities to meet reliability and increase performance. Includes E-2D System Software Configuration (DSSC) integration, engineering risk reduction efforts, Developmental Test (DT), and Operational Test (OT). In order to improve E-2D resiliency in a cyber-warfare contested environment, concurrent program protection development and integration efforts for both cybersecurity and anti-tamper will be conducted to mitigate vulnerabilities in compliance with Risk Management Framework (RMF) processes, CyberSAFE certification, and Authorities to Operate for E-2D aircraft and labs. Efforts at the E-2D Systems Test and Evaluation Lab (ESTEL) include incorporating Live Virtual Construct (LVC) capabilities to support reducing test costs and schedule as well as to mitigate testing challenges with classified capabilities. Purchase support equipment necessary to meet reliability and increase performance requirements. Incorporate updated mission systems components into both E-2D test aircraft and ESTEL to ensure accurate testing of the E-2D weapons system. Updates training devices concurrent with aircraft DSSC configurations, which includes development of E-2D Distributed Readiness Training (D-DRT) simulators that will allow training to incorporate the latest capabilities into the simulators as well as design, development, and fielding of advanced training tactics. ***FY 2022 Plans:*** Funds provided to continue DSSC-4 and DSSC-5 DT. Development of the D-DRT simulator for training on advanced tactics and incorporate test articles for flight test and in the lab. Continue to incorporate E-2D Cyber warfare program protection needed to pace future threats for critical capabilities in support of DSSC builds. Continue Fleet training development for DSSC capabilities. Develop Norfolk aircrew training procedures. Continue to build LVC capabilities, which include replicating previous flight test and conducting live and/or virtual large scale test efforts. ***FY 2023 Base Plans:*** Funds provided to complete DSSC-4 OT and continue DSSC-5 DT. Continue development of the D-DRT simulator in support of DSSC-5 for training on advanced tactics and incorporate test articles for flight test and in the lab. Continue to incorporate E-2D Cyber warfare program protection needed to pace future threats for critical					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
capabilities in support of DSSC builds. Continue Fleet training development for DSSC capabilities. Continue development of Norfolk aircrew training procedures. Continue to build LVC capabilities, by providing the ability to replicate previous flight tests in the lab environment with captured data, which includes conducting live and/or virtual large scale test efforts. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Integration, Test, and Training FY22 to FY23 increase is due to DSSC-4 OT efforts and continuous DSSC-5 DT efforts. DSSC-4 and DSSC-5 are more complex than previous DSSC builds and tests will require increased ground/flight test resources. DSSC-5 integration and DT will test new capabilities that require multiple E-2Ds airborne simultaneously. Use of the ESTEL will be maximized, but use of ESTEL can only replace some, not all, of the required multiple-aircraft tests. Increase for training development of E-2D D-DRT for advanced tactical training. D-DRT simulators will allow training that is not currently possible due to constraints of the existing test ranges and national security; critical development and integration is necessary to incorporate the latest capabilities into the simulators. Increased cost associated with the incorporation of new hardware and software capabilities into Test E-2D aircraft and/or the ESTEL. Funds provided for the ramp up of LVC which will reduce the reliance of actual aircraft for testing and provide the ability to test classified capabilities.					
Accomplishments/Planned Programs Subtotals	255.166	328.360	502.956	0.000	502.956

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
• APN/0195: *E-2D AHE*	961.629	944.475	1,043.967	-	1,043.967	349.295	64.006	0.000	0.000	2,234.667	21,046.101
• APN/0605: *Initial Spares - E-2*	2,202.986	2,295.603	1,872.417	-	1,872.417	1,751.044	1,682.669	1,611.777	1,523.998	Continuing	Continuing
• APN/0544: *E-2 Series*	165.675	199.991	188.897	-	188.897	220.777	253.558	290.993	300.741	2,262.622	5,630.655

Remarks

D. Acquisition Strategy

Milestone C Acquisition Strategy was approved by Milestone Decision Authority, Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) on 29 Dec 2008. Milestone C approval to proceed into Production and Deployment was given 11 June 2009 by USD (AT&L). Certification for entrance into Initial Operational Test & Evaluation was received on 06 Feb 2012. Full Rate Production Acquisition Strategy approved on 20 August 2012. Initial Operational Test & Evaluation concluded 1 October 2012. Successfully held a Defense Acquisition Board for Full Rate Production. Received a successful decision to enter into Full Rate

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
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Production on 01 March 2013. Initial Operational Capability achieved on 10 October 2014. The program updated the ACAT-1C Acquisition Strategy on 14 December 2016 to cover Multi-year procurement II and modernization.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AV - Primary Hardware-Fatigue	C/CPFF	Northrop Grumman Corporation (NGC) : Melbourne, FL	65.187	10.409	Nov 2020	9.031	Nov 2021	12.972	Nov 2022	-		12.972	67.633	165.232	166.612
AV - Primary Hardware-Aerial Refueling	SS/CPIF	Northrop Grumman Corporation (NGC) : Melbourne, FL	294.422	0.105	Feb 2021	2.328	Feb 2022	6.623	Feb 2023	-		6.623	32.657	336.135	336.315
MS - Primary Hardware Dev - Theater TCID	C/CPIF	Navy Syst Mgt Activity : Arlingron, VA	2.490	8.729	Dec 2020	12.141	Dec 2021	28.371	Dec 2022	-		28.371	84.639	136.370	136.370
MS - Primary Software Dev - Theater TCID	C/CPIF	Navy Syst Mgt Activity : Arlington, VA	1.282	8.328	Dec 2020	20.502	Dec 2021	25.785	Dec 2022	-		25.785	122.071	177.968	177.968
MS - Primary Hardware Dev - HECTR	Various	Northrop Grumm : Melbourne, FL	5.785	20.880	Dec 2020	16.303	Dec 2021	87.618	Dec 2022	-		87.618	77.932	208.518	208.518
MS - Primary Software Dev - NIFC	C/CPFF	Navy Syst Mgt Activity : Arlington, VA	0.000	8.175	Apr 2021	15.893	Dec 2021	27.313	Dec 2022	-		27.313	121.121	172.502	172.502
MS - Primary Software Dev - SDP	C/CPFF	Navy Syst Mgt Activity : Arlington, VA	0.000	3.532	Aug 2021	4.908	Dec 2021	6.682	Dec 2022	-		6.682	2.091	17.213	17.213
DataLinks - Primary Hardware Dev-AMIIP/ SIPRChat & TTNT	C/CPIF	Northrop Grumman Corporation (NGC) : Melbourne, FL	118.663	5.107	Nov 2020	0.000		0.000		-		0.000	0.000	123.770	123.770
Sensors- Primary Hardware Dev - ESM	C/CPFF	Lockheed Martin : New York, NY	47.301	10.255	Dec 2020	2.365	Dec 2021	0.000	Dec 2022	-		0.000	0.000	59.921	59.921
Sensors - Primary Software Development - ESM	C/CPFF	Lockheed Martin : New York, NY	26.091	3.098	Dec 2020	2.189	Dec 2021	2.000	Dec 2022	-		2.000	0.000	33.378	33.378
Sensors - Primary Software -CEA	C/CPFF	Navy Syst Mgt Activity : Arlington, VA	0.000	0.000		27.844	Dec 2021	14.040	Dec 2022	-		14.040	0.000	41.884	41.884
ITT - Primary Software Dev - Cyber	C/CPIF	Navy Syst Mgt Activity : Arlington, VA	0.397	0.130	Dec 2020	4.498	Dec 2021	7.309	Dec 2022	-		7.309	19.396	31.730	31.730

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ITT - Training Development	SS/FFP	Rockwell Collins : Cedar Rapids, IA	35.428	5.104	Dec 2020	13.287	Dec 2021	14.283	Dec 2022	-		14.283	84.519	152.621	152.621
ITT - Training Development	SS/FFP	Lockheed Martin : New York, NY	0.000	0.000		0.000		3.000	Dec 2022	-		3.000	5.800	8.800	8.800
ITT - Training Development	C/CPFF	Navy Syst Mgt Activity : Arlington, VA	0.000	0.000		0.000		13.012	Dec 2022	-		13.012	43.064	56.076	56.076
Primary Software Dev - Various	Various	Navy Syst Mgt Activity : Arlington, VA	153.162	14.379	Dec 2020	15.409	Dec 2021	27.875	Dec 2022	-		27.875	60.541	271.366	271.366
System Engineering	Various	Various : Various	5.906	7.999	Dec 2020	14.354	Dec 2021	19.009	Dec 2022	-		19.009	103.551	150.819	150.819
Prior Year Prod Dev costs no longer funded in FYDP	Various	Various : Various	3,661.121	0.000		0.000		0.000		-		0.000	0.000	3,661.121	-
		Subtotal	4,417.235	106.230		161.052		295.892		-		295.892	825.015	5,805.424	N/A

Remarks

-Air Vehicle (AV)-Primary Hardware-Fatigue will support completion of the full scale fatigue test and the disassembly and examination of the test article
-The increase for AV-Primary Hardware-Aerial Refueling will support additional Aerial Refueling tanker qualifications and continued capability envelope expansion efforts
-Mission Systems (MS)-Primary Hardware and Software Development-Theater Combat Identification (TCID) and MS-Primary Hardware Development-Hawkeye Cockpit Technical Refresh (HECTR) increase reflects funds required to support projected burn rates as the prime contractor's DSSC-6 development efforts continue to ramp towards peak levels
-Increase for MS-Primary Software Development-NIFC reflects commencement of Communications-as-a-Service (CaaS) development
-MS-Primary Software Development-Signal Data Processor (SDP) increase reflects funds required to address obsolescence and support projected burn rates as the prime contractor's development efforts approach completion
-ITT-Primary Software Development-Cyber increase reflects requirement to incorporate solutions needed to pace future threats
-ITT-Training Development costs increases to support the development of aircrew training device equipment upgrades required for concurrency with the DSSC-5 aircraft configuration; development and implementation to update NIFC capabilities into D-DRTS
-Primary Software Development-Various increases to support development of DSSC capability
-Systems Engineering cost increases due to the increased support requirement associated with DSSC-5 and DSSC-6 development efforts

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MS -Software Development-SN	C/CPFF	Navy Syst Mgt Activity : Arlington, VA	63.072	27.520	Dec 2020	21.427	Dec 2021	26.253	Dec 2022	-		26.253	23.281	161.553	161.553
MS - Software Development-Data Fusion	C/CPFF	Navy Syst Mgt Activity : Arlington, VA	68.203	22.223	Dec 2020	9.288	Dec 2021	9.784	Dec 2022	-		9.784	14.250	123.748	123.748
MS - Software Development - SPARQ	C/CPFF	Navy Syst Mgt Activity : Arlington, VA	21.057	0.000	Dec 2020	0.000	Dec 2021	0.000		-		0.000	0.000	21.057	21.057
Sensor - Software Development-CEA	C/CPFF	Navy Syst Mgt Activity : Arlington, VA	7.300	1.000	Dec 2020	0.000		0.000		-		0.000	0.000	8.300	8.300
Government Engineering Support	WR	Naval Air Warfare Center Aircraft Division (NAWCAD : Pax River, MD	176.644	16.531	Dec 2020	21.229	Dec 2021	23.594	Dec 2022	-		23.594	120.024	358.022	-
Government Engineering Support	WR	Naval Air Warfare Center Training Systems Division : Orlando, FL	13.817	0.120	Dec 2020	0.000	Dec 2021	0.000		-		0.000	0.000	13.937	-
Government Engineering Support	Various	Various : Various	18.352	4.785	Nov 2020	6.585	Dec 2021	10.165	Dec 2022	-		10.165	28.301	68.188	-
Integrated Logistics Support	Various	Various : Various	18.702	6.330	Nov 2020	12.721	Dec 2021	10.511	Dec 2022	-		10.511	55.351	103.615	-
Contractor Engineering Support ETS	C/CPFF	Precise : Lexington Park, MD	5.606	1.050	Jan 2021	1.471	Dec 2021	1.728	Dec 2022	-		1.728	6.231	16.086	16.086
Prior Year Support costs no longer funded in FYDP	Various	Various : Various	175.686	0.000		0.000		0.000		-		0.000	0.000	175.686	-
		Subtotal	568.439	79.559		72.721		82.035		-		82.035	247.438	1,050.192	N/A

Remarks

-MS-Software Development - Sensor Netting (SN) increases to support DSSC-5 development

-Government Engineering Support cost elements increase to support DSSC-5 developmental test efforts, DSSC-6 development and integration, and the ramp up of LVC capabilities, conducting live and/or virtual large scale test events

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental T&E	WR	NAWCAD : Pax River, MD	330.679	53.665	Nov 2020	63.118	Nov 2021	69.914	Nov 2022	-		69.914	304.302	821.678	-
Developmental T&E	WR	NAWCWD : Pt.Mugu, CA	0.000	0.000		0.000		9.267	Nov 2022	-		9.267	28.889	38.156	-
Developmental T&E	Various	Various : Various	37.395	2.239	Nov 2020	2.360	Nov 2021	1.078	Nov 2022	-		1.078	4.644	47.716	-
Developmental T&E - ROR	SS/CPFF	Northrop Grumman Corporation(NGC) : Melbourne, FL	17.238	0.586	Dec 2020	0.431	Dec 2021	0.439	Dec 2022	-		0.439	3.225	21.919	21.919
Developmental T&E ETS	C/CPFF	Various : Various	15.625	2.930	Feb 2021	2.969	Feb 2022	2.391	Feb 2023	-		2.391	15.596	39.511	39.511
Operational T&E	Various	Various : Various	21.231	2.581	Nov 2020	1.585	Nov 2021	6.013	Nov 2022	-		6.013	33.699	65.109	-
Test Assets	Various	Various : Various	21.667	6.949	Dec 2020	23.669	Dec 2021	35.436	Dec 2022	-		35.436	73.652	161.373	-
Prior Year T&E costs no longer funded in FYDP	Various	Various : Various	101.568	0.000		0.000		0.000		-		0.000	0.000	101.568	-
		Subtotal	545.403	68.950		94.132		124.538		-		124.538	464.007	1,297.030	N/A

Remarks

-Development T&E costs increase in FY23 due to continued DSSC-5 testing. DSSC-5 is more complex than previous DSSC builds and tests require increased ground/flight test resources. DSSC-5 integration and DT will test new capabilities that require multiple E-2Ds airborne simultaneously
-Test Asset cost category increases in FY23 as investments are made to maximize use of the E-2D Systems Test and Evaluation Lab (ESTEL)
-LVC efforts in the ESTEL will provide the ability to test classified capabilities for integration into DSSC-5 and future DSSC builds
-Increase E-2D flight test events at VX-30 Air Test and Evaluation Squadron, in Naval Air Station Point Mugu, California. The new squadron increases aircraft quantity and functionality with continued standup efforts

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Various	Various : Various	4.109	0.427	Oct 2020	0.455	Oct 2021	0.491	Oct 2022	-		0.491	2.534	8.016	-
Prior Year Mgmt costs no longer funded in FYDP	Various	Various : Various	66.708	0.000		0.000		0.000		-		0.000	0.000	66.708	-
		Subtotal	70.817	0.427		0.455		0.491		-		0.491	2.534	74.724	N/A

Remarks

-E-2D Program Travel cost.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			5,601.894	255.166		328.360		502.956		-		502.956	1,538.994	8,227.370	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
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PB23

E-2D Advanced Hawkeye

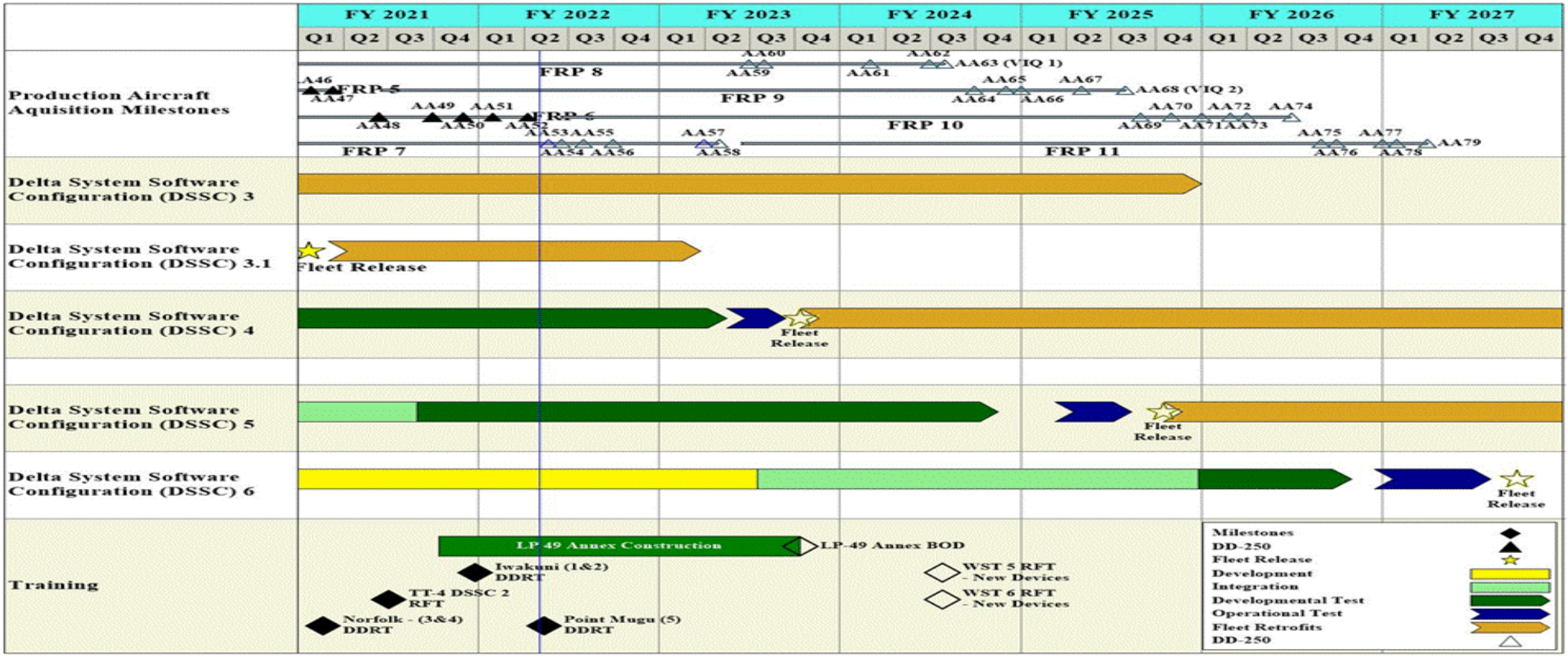

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
E-2D Adv Hawkeye Delta Systems/Software Configuration (DSSC) Builds				
Development & Design: DSSC-5 Systems Integration	1	2021	3	2021
Development & Design: DSSC-6 Hardware & Software Development	1	2021	3	2023
Development & Design: DSSC-6 Systems Integration	3	2023	4	2025
Test & Evaluation: Developmental Test & Evaluation: DSSC-4 Capability Dev & Testing	1	2021	3	2022
Test & Evaluation: Developmental Test & Evaluation: DSSC-5 Capability Dev & Testing	3	2021	4	2024
Test & Evaluation: Developmental Test & Evaluation: DSSC-6 Capability Dev & Testing	4	2025	3	2026
Test & Evaluation: Operational Test & Evaluation: DSSC-3.1 Fleet Release	1	2021	1	2021
Test & Evaluation: Operational Test & Evaluation: DSSC-4 Operational Test	2	2023	3	2023
Test & Evaluation: Operational Test & Evaluation: DSSC-4 Fleet Release	3	2023	3	2023
Test & Evaluation: Operational Test & Evaluation: DSSC-5 Operational Test	1	2025	3	2025
Test & Evaluation: Operational Test & Evaluation: DSSC-5 Fleet Release	4	2025	4	2025
Test & Evaluation: Operational Test & Evaluation: DSSC-6 Operational Test	4	2026	3	2027
Test & Evaluation: Operational Test & Evaluation: DSSC-6 Fleet Release	4	2027	4	2027
Test & Evaluation: Contract Awards: Production Milestones - FRP Lot IX CA	2	2021	2	2021
Test & Evaluation: Contract Awards: Production Milestones - FRP Lot X CA	2	2022	2	2022
Test & Evaluation: Contract Awards: Production Milestones - FRP Lot XI CA	2	2023	2	2023
Deliveries: Production Deliveries - FRP V (2 A/C)	1	2021	1	2021
Deliveries: Production Deliveries - FRP VI (1 A/C)	2	2021	2	2021
Deliveries: Production Deliveries - FRP VI (1A/C)	3	2021	3	2021
Deliveries: Production Deliveries - FRP VI (1 A/C)	4	2021	4	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: Production Deliveries - FRP VI (2 A/C)	1	2022	1	2022
Deliveries: Production Deliveries - FRP VII (2 A/C)	2	2022	2	2022
Deliveries: Production Deliveries - FRP VII - (2 A/C)	3	2022	3	2022
Deliveries: Production Deliveries - FRP VII (1 A/C)	1	2023	1	2023
Deliveries: Production Deliveries - FRP VII - (1 A/C)	2	2023	2	2023
Deliveries: Production Deliveries - FRP VIII - (1 A/C)	2	2023	2	2023
Deliveries: Production Deliveries - FRP VIII (1 A/C)	3	2023	3	2023
Deliveries: Production Deliveries - FRP VIII - (1A/C)	4	2023	4	2023
Deliveries: Production Deliveries - FRP VIII (1 A / C)	2	2024	2	2024
Deliveries: Production Deliveries - FRP VIII (1 A /C)	3	2024	3	2024
Deliveries: Production Deliveries - FRP IX (2 A/C)	3	2024	3	2024
Deliveries: Production Deliveries - FRP IX - (1 A/C)	4	2024	4	2024
Deliveries: Production Deliveries - FRP IX (1 A/C)	1	2025	1	2025
Deliveries: Production Deliveries - FRP IX(1 A/C)	2	2025	2	2025
Deliveries: Production Deliveries - FRP X (1 A/C)	3	2025	3	2025
Deliveries: Production Deliveries - FRP X - (2 A/C)	4	2025	4	2025
Deliveries: Production Deliveries - FRP X (2 A/C)	1	2026	1	2026
Deliveries: Production Deliveries - FRP X - (1 A/C)	2	2026	2	2026
Deliveries: Production Deliveries - FRP XI (2 A/C)	3	2026	3	2026
Deliveries: Production Deliveries - FRP XI (1 - A/C)	4	2026	4	2026
Deliveries: Production Deliveries - FRP XI (2 A/C)	1	2027	1	2027

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
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COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
9999: *Congressional Adds*	50.704	13.515	20.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	84.219
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Congressional Add. Program Increase for E-2D Advanced Hawkeye(AHE) radar development.

A. Mission Description and Budget Item Justification

Congressional Add. The E-2D Advanced Hawkeye and associated APY-9 radar meet the requirements specified in the Capabilities Development Document (CDD), including detection ranges, detection velocities, and tracking accuracies, verified through extensive developmental and operational flight testing and deployed operations. Program increase for E-2D advanced radar development to stay ahead of the evolving threat.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022
Congressional Add: E-2D Hawkeye Advanced Radar ***FY 2021 Accomplishments:*** N/A ***FY 2022 Plans:*** N/A	13.515	0.000
Congressional Add: Radar modernization and testing ***FY 2021 Accomplishments:*** N/A ***FY 2022 Plans:*** N/A	0.000	20.000
Congressional Adds Subtotals	13.515	20.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Program increase to continue improving radar capability of the E-2D Hawkeye to stay ahead of the evolving threat. Planned investments in the E-2D, APY-9 radar and new antenna technology will continue to pace emerging threats.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604234N / *Advanced Hawkeye*	Project (Number/Name) 9999 / *Congressional Adds*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering	C/FFP	Northrop Grumman Corporation (NGC) : Melbourne, FL	22.090	1.150	Oct 2021	2.000	Dec 2022	0.000		-		0.000	0.000	25.240	25.240
System Engineering	Various	Various : Various	12.608	0.768	Jun 2022	2.900	Nov 2022	0.000		-		0.000	0.000	16.276	16.276
System Engineering	C/CPFF	Navy Syst Mgt Activity : Arlington VA	5.067	0.450	May 2021	0.500	Aug 2022	0.000		-		0.000	0.000	6.017	6.017
System Engineering	C/CPFF	North Star Scientific Corp : Kapolei, HI	5.790	8.647	Jun 2022	10.000	Jun 2023	0.000		-		0.000	0.000	24.437	24.437
		Subtotal	45.555	11.015		15.400		0.000		-		0.000	0.000	71.970	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering	WR	SPAWAR : San Diego	0.116	0.000		0.000		0.000		-		0.000	0.000	0.116	-
Government Engineering	WR	NAWCAD : Pax River	1.698	0.200	May 2021	0.300	May 2022	0.000		-		0.000	0.000	2.198	-
Software Development	C/CPFF	Navy Syst Mgt Activity : Arlington VA	2.428	2.000	Oct 2021	4.000	Dec 2022	0.000		-		0.000	0.000	8.428	8.428
		Subtotal	4.242	2.200		4.300		0.000		-		0.000	0.000	10.742	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental T&E	WR	NAWCAD : Patuxent River, MD	0.907	0.300	May 2021	0.300	May 2022	0.000		-		0.000	0.000	1.507	-
		Subtotal	0.907	0.300		0.300		0.000		-		0.000	0.000	1.507	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604234N / *Advanced Hawkeye*	Project (Number/Name) 9999 / *Congressional Adds*	

	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	50.704	13.515		20.000		0.000		-		0.000	0.000	84.219	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604234N / *Advanced Hawkeye*	**Project (Number/Name)** 9999 / *Congressional Adds*

PB23

Advanced Radar - Congressional Add

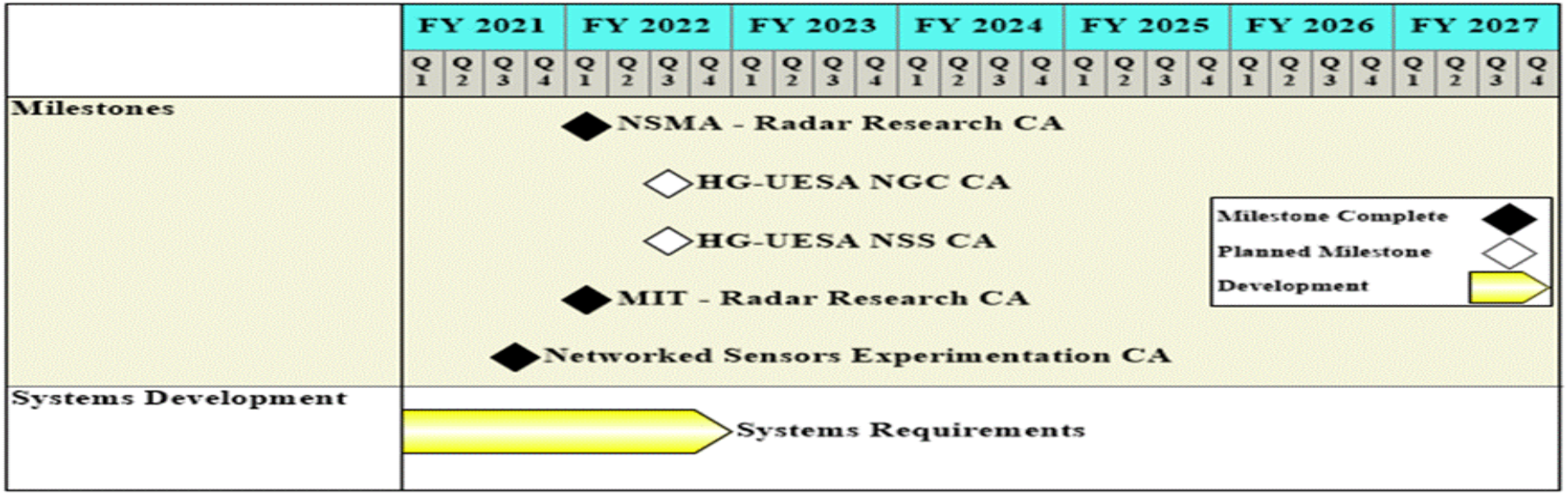

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604234N / *Advanced Hawkeye*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Advanced Radar Congressional Add				
Systems Development: Systems Requirements	1	2021	4	2022
Systems Development: Contract Awards: Production Milestones - NSMA Radar Research	1	2022	1	2022
Systems Development: Contract Awards: Production Milestones - MIT Radar Research	1	2022	1	2022
Systems Development: Contract Awards: Production Milestones - NGUESA 1	3	2022	3	2022
Systems Development: Contract Awards: Production Milestones - NGUESA 2	3	2022	3	2022
Systems Development: Contract Awards: Production Milestones - Networked Sensors Experimentation	3	2021	3	2021