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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	750.148	256.492	270.110	243.828	-	243.828	-	-	-	-	-	-
0000: *UNDIST*	0.000	0.000	0.000	2.958	-	2.958	-	-	-	-	-	-
2901: *Navy Enterprise IT*	93.803	37.245	39.365	41.305	-	41.305	-	-	-	-	-	-
2903: *NAVAIR IT*	44.167	18.767	7.776	4.683	-	4.683	-	-	-	-	-	-
2904: *NAVSEA IT*	264.840	19.671	22.408	16.579	-	16.579	-	-	-	-	-	-
2905: *BUPERS IT*	169.232	102.007	137.429	140.520	-	140.520	-	-	-	-	-	-
3167: *Joint Technical Data Integration (JTDI)*	41.321	5.331	7.680	5.952	-	5.952	-	-	-	-	-	-
3185: *Joint Airlift Information System (JALIS)*	2.688	0.335	0.306	0.365	-	0.365	-	-	-	-	-	-
3432: *NMMES-TR*	31.754	41.874	8.965	0.000	-	0.000	-	-	-	-	-	-
3784: *Judge Advocate General (JAG) Enterprise System*	0.000	1.058	0.000	0.000	-	0.000	-	-	-	-	-	-
9406: *Maintenance Data Warehouse*	78.699	22.486	36.181	31.466	-	31.466	-	-	-	-	-	-
9999: *Congressional Adds*	23.644	7.718	10.000	0.000	-	0.000	-	-	-	-	-	-

Note

The Project 2901 title was changed from AAUSN IT to Navy Enterprise IT based on Department direction to reflect enterprise level support and a change in the reporting chain of command across the Secretariat. Civilian Human Capital Strategy (CHCS) is a new start in FY 2022.

A. Mission Description and Budget Item Justification

2901 Navy Enterprise IT (formerly AAUSN IT)

SECNAV PROJECTS IT SYSTEM MODERNIZATION

The Department of the Navy Chief Information Officer, Technology Division (DONCIO IT) provides Information Technology (IT), Information Assurance (IA), Information Management (IM), Document Management (DM), Records Management (RM), Knowledge Management (KM) and other related support services to the Secretary of the Navy (SECNAV), Chief of Naval Operations (OPNAV), and the DON Secretariat. This support spans across over 24 organizations, covers nearly 6,000 individual customers, and countless worldwide end users.

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CIVILIAN HUMAN CAPITAL STRATEGY (CHCS)

The new start CHCS enables the DON to access, curate, and engage the best civilian talent, taking into account the DON's unique mission and its global impact on U.S. national security. The Secretary of the Navy (SECNAV) directed the CHCS Task Force to develop the DON's CHCS as a commitment to provide the civilian workforce a world-class experience with opportunities for continuous learning and career mobility, augmented with consumer-grade digital platforms. The CHCS Task Force will provide expertise and innovation to catalyze change and drive enhanced performance of business operations.

NMCI ENTERPRISE SERVICE TOOLS (NEST)

The NMCI Enterprise Service Tools (NEST) is the NMCI IT service management system that supports the Navy IT service lifecycle business workflow. NEST includes the NMCI Enterprise Tool (NET),the Requirements to Award Process Tool (RAPT), and other applications, which enable and manage the business workflow. NET is a custom application that has been built and maintained by the DON to support ordering of IT services. RAPT manages the requirements approval process and stores supporting documentation for previously un-priced line items. RAPT provides NET with relevant identification information for the new orderable solution, which supports the creation of orderable services. NEST serves as the single point of entry for lifecycle management of IT services on the NMCI network.

ELECTRONIC PROCUREMENT SYSTEM (ePS)

ePS provides the Department of the Navy Solution for Electronic Contract Writing replacing the existing Standard Procurement System (SPS) and DoN Integrated Contracting Environment (DICE) capabilities and deficiencies. ePS aligns Contract Writing System (CWS) with Financial Improvement Audit Readiness requirements mandated by Congress and the Department of Navy's goal for an auditable link between financial management and contract writing system. It supports strategic sourcing and seamless exchange of data in addition to evolving to meet changing requirements. The improved capabilities will meet emerging data standards Procurement Data Standards/Procurement Request Data Standards (PDS/PRDS), in addition to complying with Office of the Secretary of Defense (OSD) Clause Logic Service. ePS meets the intent of the National Defense Authorization Act of 2013 by providing an electronic means to award contracts.

FLEET ARCHITECTURE INTEGRATION TOOL (FAIT)

The Fleet Architecture Integration Tool (FAIT) provides the means by which the Department of the Navy (DoN) can develop a warfighting-focused budget leveraging digital technology enabled by machine learning and artificial intelligence algorithms. FAIT is an artificial intelligence (AI) enabled decision support tool that gives users the ability to:

1) View current investment plans pertaining to platforms, weapons, sensors, and C2 across the Department of Navy (DoN) enterprise with the aid of rich visualizations;
2) Create custom excursions for analysis and investment consideration; and

3) Validate effectiveness of investment choices nearly instantaneously through direct connection to AI-enabled, war-gaming technology.

The Fleet Architecture Integration Tool (FAIT) assists DCNO and CNO level decisions on POM year investments by modeling future-year end strength and capabilities against anticipated peer threats based on current year funding decision options. This capability cannot be duplicated through use or modification of current budget analysis or system modeling tool sets.

Starting in FY2022, FAIT's functionality is being subsumed by the Force Level Integration (FLINT) solution under the Warfighting Capabilility Assessment line.

WARFIGHTING CAPABILITY ASSESSMENT - FORCE LEVEL INTEGRATION (FLINT)

FLINT is a digital decision support solution that enables mass exploration of POM alternatives, positioning the Navy's POM programing process to evolve from a subjective human capital and document-centric process to a data driven, model-centric process that leverages automated frameworks and computing to serve as the analytical underpinning for developing the POM. FLINTs mission is to integrate the numerous and disparate tools, databases, models, simulations, analyses, and subject matter expertise necessary to facilitate and optimize Navy POM decision making. FLINT provides senior leadership with programming options that capture the fiscal trade-offs and their consequences to warfighting effectiveness when measured against defined criteria and enables relative valuation across all POM requirements.

LIVE, VIRTUAL AND CONSTRUCTIVE (LVC) TRAINING DEVELOPMENT

Under the Optimized Fleet Response Plan (OFRP) the IWC lacks a Live, Virtual and Constructive (LVC) capability or facility for basic unit level training or advanced/ integrated training for Carrier Strike Group (CSG), Amphibious Readiness Group (ARG) and DESRON staffs. Training is also constrained by security limitations and an inability to replicate adversary tactics, techniques and procedures (TTPs) with a representative opposing force. The ability to participate in the Navy Continuous Training Environment (NCTE) facilitates the integration of IW capabilities into an existing training, with an end goal being to provide reconfigurable training modules to include classrooms, hardware systems, software, scenario generation teams, and debrief tools. Providing the Fleet with a scalable virtual environment to train and build proficient IW capable forces will strengthen our warfighting ability.

DONAA IT

The Modernization Initiative includes multiple projects with RDT&E requirements: Multiple Threat Alert Center (MTAC), Data Modernization & Analytical Tools, Knowledge Network (K-Net), Consolidated Law Enforcement Operations Center (CLEOC), and Data Modernization of the Secretariat Automated Resources Management Information System (SARMIS). RDTEN funding will optimize DONAA's capability to make necessary improvements to various Secretariat systems. This modernization will ensure compliance with continued financial emerging requirements. Enhancement of financial auditability will be in compliance with DOD security system requirements.

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SECNAV Projects (BCNR, CORD, Other) IT Modernization supports priority SECNAV IT System Modernization projects with RDTEN requirements, including the Council of Review Board's (CORB) eCase IT system. This system provides a single holistic integrated case management system that supports all review board activities at Board for Correction of Naval Records (BCNR) and CORB. The eCase platform will modernize all review board activities case management capability to include: workflow integration, business intelligence/analytics, online applicant portal, applicant notifications, file/records management, document generation, and future integration with supporting systems inside and outside the Naval enterprise.

MULTIPLE THREAT ALERT CENTER (MTAC)
The Post-Cole Secretary of the Navy Anti-terrorism/Force Protection Task Force identified the need for NCIS to enhance the Multiple Threat Alert Center (MTAC). The MTAC provides key anti-terrorism/force protection products in response to Fleet tasking and is critical to Fleet protection during current Overseas Contingency Operations (OCO). This project provides funding for the development of an IT system to track the movement of NCIS special agents deployed in advance of DoN in-transit units. The ability to track and communicate with these agents is necessary in order to forward threat data to those forward deployed agents and to task them to respond to emerging threats. Funding is required for equipment and contractor support to modify COTS software.

DATA MODERNIZATION & ANALYTICAL TOOLS
NCIS data collection, filtering, and analysis infrastructure is unable to handle the increased flow of terrorism investigative and threat reporting of the Post 9/11 era. NCIS must revitalize its infrastructure and its data and investigation management capabilities to effectively counter current terrorist threats. The three main components of this portfolio investment are data modernization, knowledge management, and investigation management.

KNOWLEDGE NETWORK (K-Net)
K-Net is a Data Modernization & analytical tool being developed and soon deployed that greatly enhances NCIS's technological arsenal. K-Net implements an integrated NCIS approach for identifying, capturing, evaluating, retrieving, and sharing all of NCIS's knowledge and expertise. To that end, K-Net is a knowledge management system that improves NCIS's ability to search, analyze, fuse, and distribute both national intelligence and law enforcement information. The envisioned end state for K-Net is a secure, intuitive, web environment that is the one stop shop where applications, data, and tools are easily accessible to all of NCIS users to effectively and securely fulfill their mission regardless of when and where they operate.

CONSOLIDATED LAW ENFORCEMENT OPERATIONS CENTER (CLEOC)
The Naval Criminal Investigative Service (NCIS) enhancement of CLEOC will enable meeting Law Enforcement (LE) reporting requirements, satisfy Congressional mandates for the Defense Incident-Based Reporting System (DIBRS) and improve functionality across the Naval criminal justice community.

DEPARTMENT OF THE NAVY CRIMINAL JUSTICE INFORMATION SYSTEM (DONCJIS)
The Naval Criminal Investigative Service (NCIS) is the Executive Agent (EA) for the Department of the Navy Criminal Justice Information System (DONCJIS). This system provides a cradle to grave criminal justice and law enforcement information system. The system enables multiple communities within the DON to share criminal justice and law enforcement information. Funding is required for contractor support to develop, test, train, deploy and implement this application.

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2903 NAVAIR IT

Configuration Management System (CMS) - This program was originally identified as Joint Configuration Management Information System (JCMIS) to reflect the main software tool used for component tracking and Aircraft Configuration Management. However, as the available data sources from the fleet have expanded, the new name of CMS was chosen to better acknowledge the variety of information sources which are received, integrated, and compiled to give the most accurate component record data and aircraft configuration. CMS serves as the Program of Record (POR) to manage and control Navy and Marine Corps aviation component data reconstruction efforts. CMS compiles record data via fleet documentation of component updates and captures this information via a centrally managed database within the current software tool, Joint Configuration Management Information System (JCMIS). CMS efficiently manages product structure data, including complex interrelationships between assemblies and subassemblies, technical documentation and the parts that comprise the item. Accurate, complete and accessible configuration data is critical to the successful operations of DoD weapon systems or tracked assets. Mission readiness and operational capabilities are enhanced by CMS, as consistent integrated configuration data is readily available to operators, maintainers and logistics personnel. CMS provides users with a common database infrastructure to ensure compatibility, quality, and consistency of Configuration Management (CM) processes and provides configuration managers and analysts the validated CM information necessary for accurate maintenance, spare procurements, reliability and safety analysis, and mission readiness. Funding is budgeted to support the services of re-hosting and testing of Commercial off-the-shelf (COTS) upgrades to ensure objective performance of CMS is achieved.

Navy Cybersecurity - Cyber Warfare consists of many different aspects to include sabotage of our weapon systems, networks as well as enablement of missions. Nation and non-nation state actors are acquiring and employing more advanced cyber-attacks in order to exploit our networks and aviation systems challenging our technological edge. The threats and capabilities are real and range from exploiting capabilities, overloading weapons systems and logistics supply chains, to jamming signals or taking control of weapons systems. We must defend against adversarial cyber attacks while contributing to the exploitation of cyber warfare capabilities.

To meet these challenges and address the Chief of Naval Operations priorities and tasking, these R&D efforts are specifically focused on Naval Air Systems Command weapon or control systems and programs to ensure warfighting effectiveness as part of integrated / multi-platform kill chains. These research and development efforts will strengthen our cyber posture by developing research, development, test and evaluation capabilities and solutions to deter, detect, and mitigate cyber threats and safeguard classified naval aviation systems and platforms from "cradle to grave." These solutions will be integrated into the acquisition of weapons systems to enhance security, increase lethality, and improve resiliency in the expected operational environments. Our weapon or control systems are unique in the aforementioned environments and mission, but also in the presence of numerous non-traditional access points and trusted cyber relationships required for operational environments.

Digital Thread (DT)- Capability provides digital process integration with complete, secure and authoritative data, coordinated as part of approved Navy LOG-IT. DT integrates the product life cycle to provide universal access to authoritative data and workflow automation, enabling configuration management of data, implementation of closed loop quality, and consolidation of engineering products including digital enablement of additive manufacturing. Connecting these processes using standardized digital tools and data accelerates the product development cycle and lowers costs for support and new capability integration. The Digital Thread capability includes development and demonstration of cyber security architectures for sustainment information systems, and development of a digital/additive manufacturing data architecture and repository.

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2904 NAVSEA IT

This program includes the funding for the Information Technology (IT) tools utilized in shore maritime maintenance planning, execution, tracking, quality control, certification, closeout, employee qualifications, and payroll. This program supports ship, submarine, and aircraft carrier maintenance. The Navy Maritime Maintenance Enterprise Solution (NMMES) includes efforts for the development, support, and sustainment of maritime shore maintenance and includes multiple modernization efforts to insure effectiveness of Fleet maintenance systems. This includes the retirement and/or replacement of costly systems and applications, transition planning, and systems engineering for integration with current and future enterprise solutions. These efforts align with direction to insure that these solutions support a planned, single maintenance solution end state, as well as direction to align with multiple laws, regulations, policies, and guidance across the FYDP. It includes the modernization of Naval Shipyard, Regional Maintenance Centers, and Forward Deployed Naval Forces' planning, Maintenance, Repair and Overhaul (MRO) production tools. This includes modifications/enhancements to Shipyard IT applications, for work execution management, critical chain scheduling, workload and performance applications, the availability cost tracking, and material management applications, and other solutions such as the Electronic Technical Working Document (eTWD) initiative. The goal is to provide modernization, migration, and consolidation of obsolete legacy IT tools to a modern, supportable, and modular solution enabling Fleet Maintenance across Intermediate and Depot level maintenance activities worldwide for the Navy.

2905 BUPERS IT

MyNavy Human Resources (HR) Transformation - formerly known as Manpower, Personnel, Training & Education (MPT&E) Transformation -- will change how HR services are provided throughout a Sailor's entire "Hire-to-Retire" lifecycle and improve fleet combat readiness. By streamlining processes and systems, MyNavy HR will improve the speed, accuracy, and quality of personnel and pay services, better positioning the Navy to equip and manage its people.

This effort is the linchpin of the Navy's MPT&E Business IT Transformation strategy that stems from the decision to invest in programs that directly align with the Sailor 2025 vision. The current 70-year-old business processes and 40-year-old obsolete IT systems will not sustain Fleet anticipated growth and is neither cost efficient nor effective. MyNavy HR involves revolutionary change by using agile delivery model to the greatest extent possible to implement business IT products using the Industry Best Practices Model (e.g., early investment for largest ROI, rapid prototyping, and vanilla COTS products usage.) MyNavy HR is a fully integrated portfolio of IT Systems organized into five distinct pillars: Navy Personnel and Pay (NP2), Learning Stack (LS), Enterprise Customer Relationship Management (eCRM), Single Point of Entry (SPOE), and Authoritative Data Environment (ADE). This portfolio of systems serves as the cornerstone of the OPNAV N1 MyNavy HR strategy.

The impetus for building an adaptive family of systems is gearing MyNavy HR Transformation towards customer needs. The traditional waterfall delivery methodology of IT goods and services cannot meet the emergent requirements evolving from shortened technical obsolescence. Thus, MyNavy HR Transformation will employ an Agile delivery method that is highly structured, with a repeatable software development approach designed to quickly deliver usable capability to the end user. These capabilities are packaged as Minimum Viable Products (MVPs) which are routinely delivered to the customer for their use and evaluation. Favorably received MVPs are subsequently refined and integrated into a production baseline.

Rapidly integrating a family of systems using an agile methodology necessitates an overarching system integrator and coordinator to ingest pilots and prototypes into a technical baseline. The Transformation Portfolio Coordinator & Production (TPC&P) contract is an IDIQ contract that will deliver a family of systems in support

of MyNavy HR. This contract will provide the Global Design & Strategic Planning to baseline the "55 to 1" technical execution plan and will articulate the "system of systems" baseline release. Additionally, pilots and prototypes that have reached sufficient maturity will be integrated and deployed into the production baseline under this contract.

AUTHORITATIVE DATA ENVIRONMENT (ADE)
The Authoritative Data Environment (ADE) is an enterprise information management system that will migrate the existing legacy data warehouses into a central data repository that is composed of a data warehouse, data lake, data management tools and an Application Program Interface (API) Layer.
ADE will provide an authoritative data-sharing framework, leveraging scalable and interoperable technologies as well as business intelligence and data analytic capabilities.
ADE will need to interface and integrate with SPOE and all MyNavy HR transactional and business systems, including enabling 'plug & play' of new services, technologies, and system capabilities. Some of the key principles of ADE include:
1. Flexible architecture and scalable design.
2. Data Governance to produce authoritative, cleansed, conformed, consolidated, and calculated data.
3. Data Access to specified users.
4. Master Data Management (core elements, metadata tagging, business rules, standards, metrics, and tools).
5. Data analytics and business intelligence (descriptive, prescriptive, and predictive).
6. Identification, development, and maintenance of enterprise data policies.

ENTERPRISE CUSTOMER RELATIONSHIP MANAGEMENT (eCRM)
The eCRM solution will integrate business processes, supporting systems, and authoritative data in support of Navy Personnel Command's (NPC's) MNCC (My Navy Career Center), Navy Recruiting Command (NRC), Navy Education & Training Command (NETC), and other commands that manage the Navy workforce.
The eCRM solution provides an approach to manage information on current and future Sailors, veterans, and their families. The eCRM solution is organized by the following segments:
1. Sales Management - recording all stages of the prospecting process to include contact management, leads tracking, forecasting and initial processing.
2. Knowledge Management - providing the tools for identifying, capturing, evaluating, retrieving, and sharing information assets.
3. Case Management - supporting the automation of processes to formulate opinions, approvals, and fulfillment of case related requests.
4. Performance Management- supporting the performance of Navy Sailors.
5. Recruiting - eCRM capabilities provide several functions in support of the Navy's recruiting needs, to include:
A. Provide personally identifiable information (PII) in a commercial cloud platform.
B. Provide ability for users to access mobile platforms.
C. Meet Navy Cybersecurity requirements to protect Impact Level (IL) 4 data and will achieve an Authority to Operate (ATO) from the Navy Authorizing Official (NAO).
D. Support non-recruiting activities and address case management and knowledge management. Case management functionality supports tracking incidents, and knowledge management provides for sharing and collaborating across various business areas.

LEARNING STACK (LS)

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The Learning Stack will provide a cloud-based material solution that will streamline learning management (course/content delivery and assessments), capture and record interactive learning experiences, enable curriculum authoring and development, provide student Sailor registration and administration, create and regulate course/student scheduling, and offer e-learning capabilities, such as distance learning.

The Learning Stack is a delivery vehicle for the following core objectives of the Ready Relevant Learning (RRL) initiative:

Learning Management System (LMS) with Assessments
Learning Record Store (LRS)
Curriculum Development System (CDS)
Student Information System (SIS)
Enterprise Resource Scheduler (ERS)
Collaborative Learning Environment (CLE)

The Learning Stack is one of three lines of effort that is the Navy's strategy for it learning continuum. The other two are RRL content modernization, and the Training Network infrastructure. Collectively, these three individual efforts will cultivate instruction content that meets Fleet validated needs (ashore and afloat), and provide keystone delivery mechanisms that will decrease training timelines, assimilate operational agility, and improve overall mission readiness.

Additionally, the Learning Stack supports the MyNavy HR Transformation Program that includes yet expands beyond the RRL core initiatives identified above. In support of the broader MyNavy HR enterprise, the Learning Stack will provide a centralized, authoritative repository for Interactive Multimedia Instruction (IMI) courseware, officer and citizen development (NJROTC and ROTC candidate management), enlisted advancement exam development and distribution, enlisted degree completions, and tuition assistance authorizations.

The RRL and MyNavy HR Transformation initiatives require the development of Learning Stack capabilities that permit:

1. Mobile & flexible delivery of modular training to the Sailor
2. Synchronization of work requirements with learning modules to ensure proper training delivery
3. Leveraging cloud-hosted capabilities to optimize the Learning Stack delivery model

NAVY PERSONNEL AND PAY (NP2)
A 2015 analysis of alternatives for integration of personnel and pay capabilities recommended the use of Oracle PeopleSoft 9.2 with Global Payroll for achieving the Navy's Personnel and Pay IT needs. Follow-on analysis conducted as part of the MyNavy HR Transformation efforts in 2016 and 2017 indicated that the most cost effective approach to achieving the Transformation goals of modernizing HR Business System IT consistent with industry best practices was de-customization of the Navy Standard Integrated Personnel System (NSIPS) which uses Oracle PeopleSoft as its core technology, integration with Global Payroll, use of General Ledger

to maximize auditability and accounting functions and hosting of the integrated solution. Navy Personnel and Pay (NP2) will sustain and develop the core system of systems architecture; executing pilot programs and iterative development of capabilities for Navy's MyNavy HR Transformation.

The NP2 adapts and reengineers business processes to conform to the technical parameters of PeopleSoft 9.2 while integrating with the Direct to Treasury Pay Capability via Pay Modernization (Pay Mod). This combined effort will result in a vanilla Commercial Off the Shelf, cloud hosted, integrated personnel and pay solution that will provide the Navy with an IT system that is modern, highly automated, auditable, and more efficient.
Implementation of NP2 will result in several key benefits:
1. Improved accuracy and auditability of personnel and pay transactions.
2. Treasury Direct Disbursing eliminating Navy reliance on the Defense Joint Military Pay System.
3. Improved permeability of Active and Reserve Components to improve accuracy and eliminate delays in pay processing when a member moves between components.
4. Increased automation of common personnel and pay transactions
5. Integration of functionality currently spread across 55 different adhoc and outdated HR Business Systems.

SINGLE POINT OF ENTRY (SPOE)
SPOE is an information management concept that provides an intuitive self-service capability for Sailors to view and manage personnel and career information, providing Sailors with access to information including learning content, HR applications, and career business processes. SPOE will be the user-facing capability, enabling the MyNavy Career Center (MNCC), linking Sailors to modernized personnel and pay capabilities in NP2, providing Sailor training through the LS, and access to authoritative data, which holds their personnel and pay record information. SPOE consolidates Navy's Human HR portals, knowledge, and applications into a single, simplified user experience and will include processes and functionality, such as:
1. Integration of capabilities, to include: My Navy Portal (MNP), Mobile Applications, CRM solution, and Credential Access Management (ICAM);
2. MNP
A. Serve as the My NavyHR's single point of entry to Sailors HR resources
B. Provide capability to have a low bandwidth version accessible to Sailors operating in a restricted bandwidth environment
C. Provide CAC-free access for Sailors accessing MNP via personal devices such as smart phones, tablets, personal laptops and computers.
3. ICAM
A. Provide authentication and single sign on capability for access to the objective My Navy HR capability
4. Mobility Program
A. Ability to host and manage mobile applications through the Navy App Locker
B. Provide Mobile application management suite/platform
C. Develop new MNP mobile application - native app for Sailors to access personal data and career life events

3167 JOINT TECHNICAL DATA INTEGRATION (JTDI)

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Joint Technical Data Integration (JTDI) Program - JTDI funding supports the evaluation, testing and integration to develop a JTDI Government Off-The-Shelf (GOTS) solution for installation on Carrier and Amphibious Assault class ships, the Consolidated Afloat Networks and Enterprise Services Network (CANES) and at other globally deployed Navy/Marine Corp aviation activities. JTDI is a digital technical data access, delivery and local Organizational & Intermediate level library management toolset. It improves accuracy and timeliness of technical manual and other technical data delivery and minimizes the Fleet's library management burden. JTDI reduces maintenance work hours with a savings Return on Investment of 2.5:1. JTDI also provides deployed maintenance personnel with 24x7 collaborative reach-back/tele-maintenance capabilities so that Fleet Support Teams/Engineering Technical Services can remotely diagnose problems and assist with repairs, and provides for process efficiencies to support ongoing Aviation Fleet Technical Representative reductions.

MARINE AVIATION LOGISTICS ENTERPRISE INFORMATION TECHNOLOGY (MAL-EIT)
Increased funding to accelerate the deployment of MAL-EIT 3.0 to meet the new deadline of FOC in FY19 as well as begin development of MAL-EIT 3.1.
Funding supports the evaluation, development, testing and integration of software and hardware solutions across all US Marine Corps Aviation activities to be used in the planning and execution of geographically distributed, expeditionary Aviation Logistics (AVLOG) chains in support of deployed USMC Air Combat Element operations. The Marine Aviation Logistics Enterprise Information Technology (MAL-EIT) Program is one of four programs contained within the Marine Aviation Logistics Support Program (MALSP) modernization program known as MALSP II. Legacy MALSP is nearly 25 years old and grossly inadequate in IT capability to meet the informational, planning, and C2 needs of a dynamic, geographically distributed nodal AVLOG system. MAL-EIT is a Defense Business System Abbreviated Acquisition Program that will develop and deliver the required IT capability necessary to eliminate the IT related gaps existing in the legacy MALSP.

3185 JOINT AIR LOGISTIC INFORMATION SYSTEM (JALIS)

JALIS is an operational scheduling and aircraft management system that facilitates real-time data analysis. JALIS is a critical element in the management of DoD air logistics assets. JALIS allows:

(1) DoD Service Personnel to submit airlift requirements for DoD Personnel and cargo
(2) Air Logistics Flying Units to communicate their aircraft availability in a real-time graphic display
(3) Designated Scheduling Organizations to compare airlift requirements with available aircraft
(4) Designated Scheduling Organizations to create mission assignments

JALIS informs applicable users of mission details and modifications by using a combination of system displays and email updates. JALIS is geographically distributed and has a user base in excess of 4,000 members. JALIS facilitates the movement of thousands of DoD Personnel and tons of cargo annually in support of the following:

(1) Navy Unique Fleet Essential Airlift
(2) Army's Operational Support Airlift Agency (OSAA)
(3) United States Transportation Command (USTRANSCOM)
(4) United States Marine Corps (USMC)

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3432 NMMES-TR

The NMMES-TR is an Information Technology (IT) acquisition program that will provide a sustainable enterprise IT solution leveraging Commercial, Off-The-Shelf (COTS) technology and business processes for shore maritime maintenance. Unlike the uniquely custom designed status quo toolset, the NMMES-TR solution will not implement extensive product customization to match the current maintenance business processes; but rather, maintenance business processes will be modified to match the software solution, thereby adopting industry best practices. Accordingly, the solution will be more flexible to the BPR process, and more agile to capitalize on efficiency improvement opportunities and innovations. This will facilitate alignment with the Optimized Fleet Response Plan (OFRP) by assisting the maintenance activities with accomplishing assigned tasks as planned in order that submarines, aircraft carriers, and surface ships can properly train and deploy on schedule. NMMES-TR will also provide a modern solution that will be more effective and efficient in combating cybersecurity threats, and capable of continuous monitoring.

9406 MAINTENANCE DATA WAREHOUSE

Maintenance Data Warehouse funds the Naval Aviation Enterprise (NAE) Sustainment Vision (SV) 2020 digital transformation which is a critical component of improving readiness. It will be executed in a fully agile manner providing continuous fleet readiness improvements across the FYDP. The initial SV 2020 configuration will be supported with an agile Minimal Viable Product (MVP) as the foundation for continuous capability introduction. The Aviation Logistics Environment (ALE) will provide the seamless environment to support the integration of the other capabilities developed in Maintenance Data Warehouse.

Aviation Data Warehouse/Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE) program is the next generation data warehouse containing over 30 years of aircraft maintenance, flight, components, and usage data. Through the use of web-based, commercial off the shelf software for data load, analysis, query, and reporting tools, the user has the capabilities to effectively obtain readiness data in a near real-time environment, as well as providing historical data for long range planning, trend and records analysis, records reconstruction, and compliance with technical directives. DECKPLATE supports the mission of the warfighter who requires a single source of near real-time aviation data in which to base critical readiness decisions. DECKPLATE collects data from authoritative sources, such as the fleet maintenance systems, into a data warehouse. Because the warfighter only needs to access one database, the time consuming task of collecting various pieces of data from various sources will be reduced and ultimately eliminated. This also accomplishes a reduction in legacy systems mandated by Office of the Chief of Naval Operations. DECKPLATE manages total inventory for two major categories of assets, Aircraft (General Equipment) and Engine/Propulsion Systems/Modules (EPSMs) (Operating Materials & Supply). DECKPLATE is comprised of the transactional Aircraft Inventory and Readiness Reporting (DECK-AIRRS) and the Engine Transaction Reporting (DECK-ETR) subsystems which provide the complete lifecycle for aircraft and Engine/ Propulsion System/Modules (EPSMs). DECKPLATE has been identified as a level 1 financial feeder system due to the value of the aircraft and EPSM's managed in the system, and continues to respond to audit compliance and Cyber Security mandates. DECKPLATE is a core feeder system to numerous NAVAIR efforts.

Condition Based Maintenance Plus (CBM+) solution is an initiative which provides Naval Aviation Enterprise with common enabling capabilities which deliver timely data-driven, decisional information to optimize aircraft availability and materiel readiness by incorporating health and usage leading indicators into the failure mode

mitigation process, enabling the Warfighter to more efficiently meet mission requirements through automated analysis and decision making processes. The CBM+ initiative increases readiness through streamlined maintenance processes which provide the sustainment base with timely, actionable logistics/engineering data and integrated analytics not previously available, enabling engineers and acquisition professionals to support system improvements based on CBM+ acquired data and analytic results. CBM+ provides the enabling infrastructure and storage solutions within an Enterprise common environment needed to store and analyze weapon system sensor data to extend the life of current and new acquisition aircraft, realizing savings from reductions in field (organizational and intermediate) maintenance actions, reduced functional check flight hours, mishap mitigation, and reduced parts usage.

Aviation Logistics Environment (ALE) provides a global logistics enterprise solution, delivering capabilities via a net-centric, shared data environment that supports shore-based, afloat, and expeditionary operations. ALE consists of three components; Ground Station, Aviation PLM, and Enterprise Service Bus (ESB). The Maintenance Engineering Ground Station for Aviation (MEGA) is the Naval Aviation Type/Model/Series (T/M/S)-agnostic ground station. MEGA is currently under development using Government off-the-Shelf (GOTS) software and PLM/ESB is configuring Commercial off-the-Shelf (COTS). The Aviation Product Lifecycle Management (Aviation PLM) capability will provide the digital thread of aviation logistics data for allowable and as-configured Repair Bill of Materials (R BOM) sustainment, technical bulletins, technical directives and engineering change proposals, and reliability centered maintenance and maintenance planning. The Enterprise Service Bus (ESB) capability will provide the digital backbone for data connections to and from authoritative data sources. ALE consolidates aging, near-end-of-life systems and applications and aligns Information Assurance (IA) and cybersecurity requirements.

Vector (formally Integrated Logistics Management System (ILSMS)) supports the development of a common logistics analytical application which uses a disciplined approach to Business Intelligence (BI) architecture by combining products, data, technology and methods aimed at key Naval Aviation Enterprise (NAE) business processes. Vector provides a single view of the data to focus on aircraft readiness, maintenance, supply, cost, and man-hours. Vector provides naval aviation with a common view of approved key performance metrics and the capability to perform multi-system analysis of Ready for Tasking (RFT)/Ready Basic Aircraft (RBA) Gap drivers, 'Top-Down' aircraft systems analysis down to the component level. Vector identifies system performance trends early to mitigate future readiness and cost impacts to the fleet.

- Dynamic Scheduling optimizes aircraft (BuNo specific), engine and component maintenance through task sequencing based on reliability and failure data, and asset utilization vice calendar directed maintenance. Dynamic Scheduling will have insight to demand across the NAE and can affect maintenance across all levels of maintenance. Dynamic Scheduling IT system capability will interface with authoritative source systems providing and consuming operational demand, man power, training, supply and others. Near term Dynamic Scheduling capability is planned for NALCOMIS OOMA and future state DS capability is planned for NAMS implementation. Both material and non-material changes implemented along with the DS IT system will provide capability that overcomes the challenges faced by the as-is state to include: Advanced scheduling capabilities interfaced with current future MRO system to enable system assisted scheduling, optimization and opportunistic maintenance.
- Insight and the ability to collaborate and affect schedules across all levels of maintenance and MRO systems.
- Capture and analysis of RCM mitigations strategies with the ability to quickly implement changes to maintenance tasks and periodicities.
- The ability to package Technical Manuals for serial number specific, scheduled event tasks at the point of maintenance.
- The ability to provide additional point of maintenance technical data and support to enable the maintainer of the future.

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605013N *I Information Technology Development*

Optimized Scheduled Maintenance and Dynamic Scheduling IT system capabilities will contribute to the reduction of MMHs and increase in operational availability objectives by positively affecting the efficiency of maintenance at the O, I & D-Levels of maintenance across the NAE. Future state OSM IT system capability may be provided by the Aviation Logistics Environment (ALE)/Product Lifecycle Management (PLM) solutions. Dynamic Scheduling IT capability is schedule to be developed as an interface to NALCOMIS OOMA in FY 19 timeframe. Future state version of Dynamic Scheduling IT capability will interoperate with Naval Aviation Maintenance System (NAMS) and other future state system such as Naval Data Repository (NDR), ALE/PLM, and Navy Depot Management System (NDMS).

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	268.547	356.173	355.056	-	355.056
Current President's Budget	256.492	270.110	243.828	-	243.828
Total Adjustments	-12.055	-86.063	-111.228	-	-111.228
• Congressional General Reductions	-	-1.691			
• Congressional Directed Reductions	-	-94.372			
• Congressional Rescissions	-	-			
• Congressional Adds	-	10.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.054	0.000			
• SBIR/STTR Transfer	-10.001	0.000			
• Program Adjustments	0.000	0.000	-112.204	-	-112.204
• Rate/Misc Adjustments	0.000	0.000	0.976	-	0.976

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2020	FY 2021
Project: 9999: *Congressional Adds*		
Congressional Add: *NAVSEA readiness and logistics information technology digital transformation pla*	7.718	0.000
Congressional Add: *Cyber Innovations in Classified Environments*	0.000	3.000
Congressional Add: *Cyber Soutions for Aviation Systems and Facilities*	0.000	7.000
Congressional Add Subtotals for Project: 9999	7.718	10.000
Congressional Add Totals for all Projects	7.718	10.000

Change Summary Explanation

Technical: Not applicable.

Funding: Not applicable.

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605013N *I Information Technology Development*

Schedule:

Project 2901 - ePS: Delays to the planned Release 1 and Release 2 efforts are due to the program focusing on resolving performance issues within Limited Deployment prior to executing additional options on the contract. Instead of exercising the options based on a calendar date, the program has tied the future options to successful completion of tasks and deployment of the Limited Deployment sites.

Project 2903-Starting in FY22 Digital Thread changed to two Limited Deployments a year to become more product focused and adopt a more agile approach to deliver incremental capabilities faster.
Project 3167 - MAL-EIT changes to correct events for MAL-EIT 3.3 that were erroneously reflected in the schedule. Software Development, Technical Evaluation DT&E/OT&E and Limited Fielding have moved 12 months.

Project 3432 - The program office conducted a review of the schedule in response to the 19 month schedule risk identified by NCCA during the Gate 4 Cost Review Board (CRB) and formalized in the approved Component Cost Position (CCP) dated 12 Apr 2018. After careful review of the scheduled activities, the timeline for Increment 1 and the total program were increased by a combined total of 14 months to mitigate the stated risk.

Project 9406-Aviation Logistics Environment (ALE) changed the numbering scheme on the Limited Deployments to coincide with the Department of the Navy Integrated Master Schedule. Test and Evaluation and Deliveries were also updated to coincide with Software Development Limited Deployments.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*	Project (Number/Name) 0000 / *UNDIST*	

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
0000: *UNDIST*	0.000	0.000	0.000	2.958	-	2.958	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Funds support VCNO's decision and Accelerating Performance Initiative reform effort directing NAVMAC to reconstitute the Navy's Shore Manpower Requirements Determination (SMRD) program.

A. Mission Description and Budget Item Justification

To comply with VCNO direction to reconstitute a centralized Navy Shore Manpower Requirements Determination Program to deliver consistent, accurate and balanced shore manpower demand signals for funding decisions. Senior Navy leadership is concerned SMRD decentralization at the BSO level does not deliver consistent, accurate, or analytical requirements absent a centralized, objective third party to provide inspections, validation, and training. Issue provides phased funding across the FYDP, resourcing NAVMACs SMRD processes to mirror requirements consistency and accuracy delivered by current operational Fleet Manpower Requirements Determination (FMRD) processes. Implementing this COA will deliver a uniform and analytically-based program, increasing leadership and Resource Sponsor confidence in SMRD thoroughness and accuracy. The Navys Shore Manpower Requirements Determination (SMRD) program contains over 430K total force (officer, enlisted and federal civil service) manpower requirements, representing over 60% of the Navy's Total Force manpower requirements. Per OPNAVINST 1000.16 series, BSOs are responsible for their SMRD through approved study protocols. While some BSOs have approved protocols (USFF/CPF, CNIC, and BUMED), most are performing this function with limited resources and oversight. Navy leadership expressed concern the current SMRD process lacks accuracy, fidelity and objectivity.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Navy Shore Manpower Requirements Determination (SMRD)	0.000	0.000	2.958	0.000	2.958
Articles:	-	-	-	-	-
FY 2021 Plans: N/A					
FY 2022 Base Plans: N/A					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 0000 / *UNDIST*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
New start of $2.958M in FY22 support VCNO's decision and Accelerating Performance Initiative reform effort directing NAVMAC to reconstitute the Navy's Shore Manpower Requirements Determination (SMRD) program.					
Accomplishments/Planned Programs Subtotals	0.000	0.000	2.958	0.000	2.958

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 0000 / *UNDIST*

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
Development Support	Allot	CNP : Washington, DC	0.000	0.000		0.000		2.958	Nov 2021	-		2.958	-	-	-
		Subtotal	0.000	0.000		0.000		2.958		-		2.958	-	-	N/A

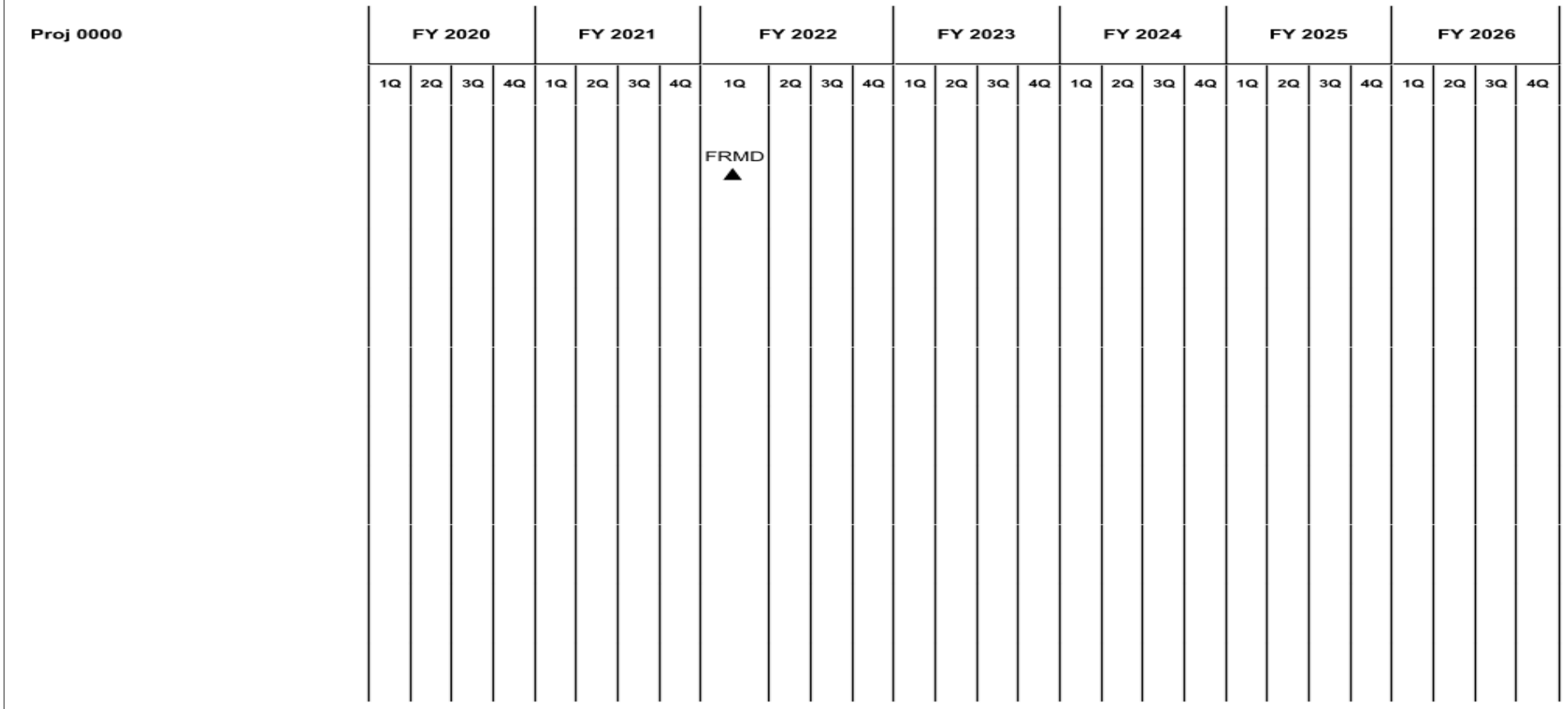
Remarks

Funds support VCNO's decision and Accelerating Performance Initiative reform effort directing NAVMAC to reconstitute the Navy's Shore Manpower Requirements Determination (SMRD) program.

	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	0.000		0.000		2.958		-		2.958	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 0000 / *UNDIST*



2022PB - 0605013N - 0000

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 0000 / *UNDIST*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0000				
FRMD Transformation	1	2022	1	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy									Date: May 2021			
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				Project (Number/Name) 2901 / *Navy Enterprise IT*			
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**
2901: *Navy Enterprise IT*	93.803	37.245	39.365	41.305	-	41.305	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

The Project 2901 title was changed from DONAA IT to Navy Enterprise IT based on Department direction to reflect enterprise level support and a change in the reporting chain of command across the Secretariat.

The Civilian Human Capital Strategy (CHCS) is a new start in FY 2022.
In FY22 funding for the NMCI Enterprise Service Tools (NEST) was realigned to RDTEN Budget Activity 08 Program Element 0608113N Project 2901.

A. Mission Description and Budget Item Justification

Secretariat Offices (formerly AAUSN IT)

The Department of the Navy Chief Information Officer, Technology Division (DONCIO IT) provides Information Technology (IT), Information Assurance (IA), Information Management (IM), Document Management (DM), Records Management (RM), Knowledge Management (KM) and other related support services to the Secretary of the Navy (SECNAV), Chief of Naval Operations (OPNAV), the DON Secretariat, including political appointees, flag officers and senior executives. This support spans across over 24 organizations, covers nearly 6,000 individual customers, and countless worldwide end users. These services include complete life-cycle software support, software application development, implementation, and post development software support. DONCIO IT is heavily involved in the research and analysis of emerging trends and technologies for use throughout the Secretariat. DONCIO IT is also a valued partner and stakeholder in the development, review, and implementation of all DON and DoD IT related policies that affect the Secretariat members. Additionally, DONCIO IT astutely manages the telecommunication needs of the Secretariat and OPNAV staffs; to include providing state-of-the-art mobile devices, services and support, laptops to promote telework, and a host of other peripherals as needed when these executives travel abroad and around the country. DONCIO IT acts as a trusted agent for the review and approval of all IT related acquisitions across the Secretariat and provides expert guidance on the utilization of DON service contracts that support the purchase of software, hardware and other IT-related functions. DONCIO IT also manages and supports all Cyber Security functions for its Secretariat customers. Furthermore, DONCIO IT manages and supports all administrative requirements and functions of the NMCI/NGEN contract for all Secretariat customers. Database and application development support is required to test, evaluate, and modify current and new systems/capabilities for Secretariat customers.

Navy's Civilian Human Capital Strategy (CHCS)
The DON's Civilian Human Capital Strategy is a new start. The CHCS plans to transform how the DON accesses, curates, and engages its civilian workforce.

The CHCS Task Force is responsible for designing, conducting, and evaluating limited-scope pilot projects, introducing new or enhanced technologies to develop transformation recommendations for the larger DON enterprise. The CHCS aims to streamline DON civilian human resource (HR) investments. Currently, 18 Budget Submitting Offices (BSOs) reported 352 CHCS aligned programs and 152 technologies.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *Navy Enterprise IT*

The CHCS is designed to identify opportunities for enterprise-wide HR reform by piloting leading practice operating concepts and technologies like artificial intelligence and cloud computing. The centralized approach to innovation will minimize the upfront cost of identifying solutions, achieving cloud and cybersecurity compliance, and reduce the cost of investments through scale purchases. Pilot assessments and evaluations contribute to business case analysis reports with recommendations for the Assistant Secretary of the Navy (Manpower & Reserve Affairs) (ASN (M&RA)), Under Secretary of the Navy (UNSECNAV), and/or the Secretary of the Navy (SECNAV) regarding the broader implementation of technologies across the DON.

Funds will be used to support the acquisition of licenses for proprietary technology solutions, evaluate the utility of those technologies in several pilot programs, and configure approved technologies for wider implementation across the DON. FY 2022 funds will support programs focused on the implementation of artificial intelligence in recruiting, automation of digital human resource manual transactions (AUTONOA), predictive people analytic dashboard development within the ADVANA Jupiter platform, and evaluation, and expansion of a centralized learning management system.
ELECTRONIC PROCUREMENT SYSTEM (ePS)

The electronic Procurement System (ePS) is the Department of the Navy's (DON) End-to-End (E2E) Contract Writing System (CWS). It will provide the Navy and Marine Corps contracting community with a full contract writing management capability and integrates with federally mandated systems, DON financial systems, and industry. The ePS will utilize Department of Defense (DoD) standards and support auditability. The ePS will address existing CWS challenges including outdated architecture, limited capabilities, scalability concerns, and existing obsolete legacy systems.

Full deployment of the ePS ensures compliance of the DON's contracting abilities with the following legislative mandates: the writing and management of all contracts must now occur in congressionally approved computer systems (Section 862 of the National Defense Authorization Act (NDAA) of 2013); the central management and oversight of all DoD business (10 U.S. Code (U.S.C.) Section 2222); and all contracting actions must be fully auditable and traceable (Section 1003 of the NDAA 2010 & Office of the Secretary of Defense (OSD) Financial Improvement and Audit Readiness (FIAR) Guidance).

The ePS will use DoD data exchange capabilities (e.g.; Procurement Data Standard (PDS) and Purchase Request Data Standard (PRDS)) in order to achieve standardized data interoperability with external systems. The Navy Enterprise Service Bus (NESB) serves as the hub to relay procurement data to various finance and other systems of record, such as Navy Enterprise Resource Planning (Navy ERP), Standard Accounting & Reporting System (STARS) and Standard Accounting Budgeting & Reporting System (SABRS).

The result of successful ePS implementation will be a contracting workforce that conducts standardized, seamless, end-to-end contract management in a secure computing environment, issuing timely contracts that comply with all DoD/Federal laws, regulations, and policies.

NMCI ENTERPRISE SERVICE TOOLS(NEST)

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *Navy Enterprise IT*

The NMCI Enterprise Service Tools (NEST) is an integrated set of tools that facilitate the full service lifecycle management (SLM) of customer service requests for IT services, including RAPT(Requirement to Award Process Tool), NET (NMCI Enterprise Tool), and Enterprise Reporting. NEST is considered a Government Owned/ Contractor Operated Defense Business System (DBS) that has a valid ATO.

NEST is officially the single contract writing system for the DON's (i.e. all of Navy, including OCONUS, and USMC) NGEN-R contracts. NEST absorbed historically vendor-owned functionality and integrated the DoD's compliance standards, bringing NGEN-R into the DoD's Procure-to-Pay (P2P) space. Part of the requirement of adhering to P2P standards involved interfacing with 7+ systems. The team is continuously interfacing with new systems to comply with compliance mandates and Financial Acquisition and Regulation (FAR) clauses.

Serving as the sole NGEN-R ordering tool for Navy and USMC, NEST serves an extensive user base of more than 3,000 users and services 1.1M+ Navy and USMC service members globally. With this many users, NEST handles a large amount of financial transactions. In FY19, more than $600M of technology goods and services were passed through NEST, resulting in 86,000+ invoices processed.

In FY22 funding for the NMCI Enterprise Service Tools (NEST) was realigned to RDTEN Budget Activity 08 Program Element 0608113N Project 2901.

FLEET ARCHITECTURE INTEGRATION TOOL (FAIT)

The Fleet Architecture Integration Tool (FAIT) enables the Department of Navy to develop a warfighting-focused budget by leveraging machine learning and artificial learning technology. FAIT provides an easy-to-use, dynamic tool to produce visually compelling future fleet tradeoff options with drill down capability. FAIT's artificial intelligence enabled decision support allows users to:

1) View current investment plans pertaining to platforms, weapons, sensors, and C2 across the Department of Navy (DoN) enterprise with the aid of rich visualizations;
2) Create custom excursions for analysis and investment consideration; and
3) Validate effectiveness of investment choices nearly instantaneously through direct connection to AI-enabled, war-gaming technology.

The Fleet Architecture Integration Tool (FAIT) assists DCNO and CNO level decisions on POM year investments by modeling future-year end strength and capabilities against anticipated peer threats based on current year funding decision options. This capability cannot be duplicated through use or modification of current budget analysis or system modeling tool sets.

Starting in FY2022, FAIT's functionality is being subsumed by the Force Level Integration (FLINT) solution under the Warfighting Capabilility Assessment line.

WARFIGHTING CAPABILITY ASSESSMENT - FORCE LEVEL INTEGRATION (FLINT)

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *Navy Enterprise IT*

FLINT is a digital decision support solution that enables mass exploration of POM alternatives, positioning the Navy's POM programing process to evolve from a subjective human capital and document-centric process to a data driven, model-centric process that leverages automated frameworks and computing to serve as the analytical underpinning for developing the POM. FLINTs mission is to integrate the numerous and disparate tools, databases, models, simulations, analyses, and subject matter expertise necessary to facilitate and optimize Navy POM decision making. FLINT provides senior leadership with programming options that capture the fiscal trade-offs and their consequences to warfighting effectiveness when measured against defined criteria and enables relative valuation across all POM requirements.

LIVE VIRTUAL AND CONSTRUCTIVE (LVC) TRAINING DEVELOPMENT

The Live Virtual Constructive (LVC) Training program funds will be used to develop and deliver Information Warfare (IW) training in a scalable, Navy Continuous Training Environment (NCTE) compliant capability in a controlled environment. This effort builds upon existing trainers (Fleet Synthetic Training Electronic Warfare Trainer and the Naval Research Development and Engineering labs) to provide continuous development and iterations introducing new technologies and methodologies to advance the IW capabilities in a Shore Tactical Level environment to address the continually evolving threats.

LVC includes fleet requirements to integrate realistic IW capabilities and effects - specifically Electronic Warfare (EW) and Meteorology and Oceanography (METOC) inputs at the GENSER and TS/SCI level. This capability enables individual units and CSG/ARG/ESGs to exercise integrated kinetic and non-kinetic capabilities at the Shore Tactical Level utilizing the Maritime Operation Center (MOC) to include operations/intelligence fusion required to overcome Great Power Competition threats. Additionally, LVC facilitates classified IW TTP development (including Signals Intelligence / Counter - Intelligence, Surveillance, and Reconnaissance (SIGINT / C-ISR)) in a closed network, minimizing the potential for compromise to adversaries. Integration of a realistic IW virtual capability into LVC events via NCTE supports holistic readiness through force generation of effectively trained, resilient IW forces.
The key pieces to integrate IW capabilities into current and future LVC Training Environments include:
- Leverage existing trainers (e.g. Naval Research, Development and Engineering (NRDE) laboratories and Electronic Warfare (EW) Fleet Synthetic Trainer) to employ current virtual IW capabilities (including METOC, and SIGINT/C-ISR) via Navy Enterprise Tactical Training Network (NETTN) to provide distributed training for Maritime Operation Center Shore Tactical Level.

- Virtualize existing IW training tools, such as "Carrier Hunt" or "Gator Hunt" using serious gaming technologies.

- Develop additional unit level and team training vignettes, scenarios, and curricula based on real-world use cases to provide "reps and sets" and build IW critical thinking skills and tactical proficiency.

- Utilize authoritative standards, such as NCTE Interoperability Standards (NIS) as means to guide future training development.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *Navy Enterprise IT*

- Provide Warfare Development Centers the capability to evaluate blue force doctrine and TTP capabilities and limitations in a threat representative environment against replicated realistic opposing force/adversary TTPs to generate viable training events and scenarios.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: SECNAV Projects IT System Modernization	0.673	0.607	0.664	0.000	0.664
Articles:	-	-	-	-	-
FY 2021 Plans: Continue role as Package Submitting Officer (PSO) for the Risk Management Framework (RMF) Assessment and Authorization (A&A) requirements of Command Financial Management System (CFMS), which ensured CFMS maintained its Authority to Operate (ATO) on the Navy network. Continue Database development and modification for legacy, current, and future systems. Continue providing Database Administrator (DBA) development for Oracle and Microsoft Structured Query Language (MS SQL) based systems and applications. Application Developer support to modify current systems and develop new systems/capabilities for Secretariat customers.					
FY 2022 Base Plans: Continue role as PSO for the RMF Assessment and Authorization requirements of CFMS, which ensured CFMS maintained its ATO on the Navy network. Continue Database development and modification for legacy, current, and future systems. Continue providing Database Administrator development for Oracle and Microsoft Structured Query Language (MS SQL) based systems and applications. Application Developer support to modify current systems and develop new systems/capabilities for Secretariat customers.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement: FY 2022 funding increase supports additional costs in the next option year of the contract due to continued research, development and testing of applications in the DON environment in support of priority SECNAV IT System Modernization projects.					
Title: Civilian Human Capital Strategy	0.000	0.000	1.779	0.000	1.779
Articles:	-	-	-	-	-
FY 2021 Plans: N/A					
FY 2022 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *Navy Enterprise IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Evaluate and select commercial recruitment targeting tools based on FY 2021 pilot program. Purchase licenses to prepare for implementation. - Configure digital human resources automation (AUTONOA) in preparation for wider implementation across the Department of the Navy enterprise. - Expand configuration and preparation of the ADVANA Jupiter platform to support DON HR predictive people analytic dashboard in preparation for implementation. - Expand utilization of Learning Management System (LMS) for broader use across the DON beyond the SYSCOM communities, based on FY 2021 pilot learnings within Naval Sea System Command (NAVSEA), Naval Air Systems Command (NAVAIR), NAVSUP, and other targeted functional communities. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Civilian Human Capital Strategy (CHCS) is a new start beginning in FY22.					
Title: Electronic Procurement System (ePS)	28.655	33.400	25.239	0.000	25.239
Articles:	-	-	-	-	-
Description: Funding required for the Electronic Procurement System (ePS) to provide support for configuration, integration, testing, training, deployment and implementation of the system. ***FY 2021 Plans:*** Complete Limited Deployment (LD) and begin Release 1 planning activities for migration into ePS. Due to delays with LD, only the internal planning activities for R1 will begin in FY21, with the other R1 activities pushing into FY22 and FY23. FY 21 Systems Engineering efforts include the completion of LD User Acceptance Testing (UAT), defect resolution, and regression testing. Due to the significant number of defects found during LD UAT, defect resolution and regression testing events have been extended. Final mock data migrations, training activities, and LD cutover for the 3 LD sites (300 critical users) will also be completed with FY 21 funds. R1 planning efforts include updating documentation and technical evaluation of proposals. ***FY 2022 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
Complete Release 1 (R1) planning activities and begin design efforts, interface development, system configuration, and a major version upgrade to the COTS product. R1 activities will provide 92% of all requirements once the system is deployed and will increase the user base to over 3,500 critical users. R1 commands being migrated and external system interfaces, 1. MSC, Migration from SPS, interfacing with Navy ERP 2. NAVAIR, Migration from SPS, interfacing with Navy ERP 3. ONR, Migration from PRISM, interfacing with Navy ERP 4. NAVWAR, Migration from SPS, interfacing with Navy ERP, NEST 5. USMC HQ I&L, Migration from SPS, interfacing with PR Builder, SABRS/DAI 6. MARCORSYSCOM, Migration from SPS, interfacing with PR Builder, SABRS/DAI 7. NAVSEA, Migration from SPS, interfacing with Navy ERP; Shipyard Management Information System (SYMIS MF Cost) Material Access Technology (MAT MF) Systems engineering efforts include: Begin R1 deployment preparation and gap; Gap closure efforts for R1 planned requirements; R1 design and Build Technical Review (BTR); R1 interface development for additional R1 financial systems and preparation for testing activities; mock data migrations; and increased hosting capacity. R1 license purchases are also planned for FY 22. Internal planning efforts for Release 2 (R2) sites will also begin in FY 22. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease in FY22 of $8.161M is driven by a schedule shift and the application of lessons learned from the earlier deployments.					
Title: NMCI Enterprise Service Tools (NEST)	7.917	1.750	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: The NMCI Enterprise Service Tools (NEST) is an integrated set of tools that facilitate the full service lifecycle management (SLM) of customer service requests for IT services, including RAPT(Requirement to Award Process Tool), NET (NMCI Enterprise Tool), and Enterprise Reporting. NEST is considered a Government Owned/Contractor Operated defense business system (DBS) that has a valid ATO.					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
NEST is officially the single contract writing system for the DON's (i.e. all of Navy, including OCONUS, and USMC) NGEN-R contracts. NEST absorbed historically vendor-owned functionality and integrated the DoD's compliance standards, bringing NGEN-R into the DoD's Procure-to-Pay (P2P) space. Part of the requirement of adhering to P2P standards involved interfacing with 7+ systems. The team is continuously interfacing with new systems to comply with compliance mandates and Financial Acquisition and Regulation (FAR) clauses. Serving as the sole NGEN-R ordering tool for Navy and USMC, NEST serves an extensive user base of more than 3,000 users and services 1.1M+ Navy and USMC service members globally. With this many users, NEST handles a large amount of financial transactions. In FY19, more than $600M of technology goods and services were passed through NEST, resulting in 86,000+ invoices processed in external tools annually. The NEST team serves as a centralized link between enterprise and project level activities, while we maintain and operate all NEST functions, including O&M support and strategic PMO work. Some of those activities include but are not limited to: executive guidance and brief support, end-to-end software development lifecycle implementation in accordance with CMMI (Capability Maturity Model Integration) level 4, prioritization of program missions/objectives, RMF/IA support/process definition, risk management, and FY planning & road mapping. ***FY 2021 Plans:*** In FY21, NEST tasks are centered on the completion of SMIT integration, NEST Graphical User Interface (GUI) updates, address any additional requirements after the NGEN-R award, and any changes in DOD/DON procurement policies and mandates. Support includes the start of implementation of Navy ePS interface. Additional priorities for NEST includes: -Contract Transition: Support requirements for transition between NGEN extension and EUHW/SMIT, and end-state integration once vendor systems are developed -ONE-NET Ordering: OCONUS ordering EUHW via NEST under NGEN-R -Task Order Modifications: Alignment of mod types to Procurement Data Standard (PDS) -Contract Management Enhancements: Align NET Contract Management module to PDS -Service level requirement (SLR) Reporting: Enterprise-level dashboards to monitor NMCI vendors' SLRs -PDS Compliance Reporting: Dashboard of NEST PDS quality metrics for OSD reporting -Common Launch Enhancements: Enabling front-end account management for the Enterprise Reporting application					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
-NEST Directory: CAC-enabled directory of ordering POCs for end users across the DON -USMC CPFF Ordering: Support ordering and management of CPFF CLINs in NEST -Vendor(s): EUHW and SMIT vendor systems for OTP processing -WAWF: EDI transactions to abbreviate WAWF approval steps for NMCI invoices -DoDAAD: Automation of DoDAAC reconciliation in NEST ***FY 2022 Base Plans:*** In FY22 funding for the NMCI Enterprise Service Tools (NEST) was realigned to RDTEN Budget Activity 08 Program Element 0608113N Project 2901. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease in FY22 due to funding for the NMCI Enterprise Service Tools (NEST) was realigned to RDTEN Budget Activity 08 Program Element 0608113N Project 2901.					
Title: Live, Virtual and Constructive (LVC) Training Development	0.000	0.000	8.451	0.000	8.451
Articles:	-	-	-	-	-
FY 2021 Plans: N/A ***FY 2022 Base Plans:*** In FY22, Live Virtual and Constructive (LVC) Training will leverage existing government contracts through Naval Information Warfare Center (NIWC) Pacific, AIRFORCE and NAVAIR to provide integrated test facility, scenario development and experimentation on Joint Cognitive Operational Research Environment (JCORE) platform and Virtual Wizard Capability Build - Next Generation Threat Simulator (NGTS) platform interface/experimentation. - Live Virtual and Constructive (LVC) Scenario Development and Training Event Execution leverages Naval Information Warfare Center Pacific Naval Research, Development and Engineering (NIWC NRDE) environment to provide 8 training events; 2 Warfare Tactics Instructor (WTI), 2 Carrier Strike Group (CSG), 2 Amphibious Readiness Group (ARG) and 2 Experimentation/Validations; and building Information Warfare (IW) training scenarios to integrate into OFRP training exercises. - I-Warrior Integration builds a new app store bridging IW scenarios, curricula, tabletop exercises and war-gaming between Joint Cognitive Operations Research Environment (JCORE) architecture and end users under an engineering services contract with Massachusetts Institute of Technology (MIT) Lincoln Labs.					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
- Virtual Wizard / Next Generation Threat Simulator (NGTS) provides NGTS and QUEST software for WTI training and tactics, techniques and procedures (TTP) development and validation; high NCTE compliant "sand box" to test, train and validate IW TTPs; and modeled environment to support vignettes focused on developing existing and emerging IW capabilities. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase in FY22 funding supports Live, Virtual, and Constructive (LVC) Training program in developing and delivering Information Warfare (IW) training in a scalable, Navy Continuous Training Environment (NCTE) compliant capability in a controlled environment.					
Title: Fleet Architecture Integration Tool (FAIT) ***Articles:*** ***FY 2021 Plans:*** - FY21 funding develops FAIT capabilities, including integration between the core cost estimation, fleet architecture -investment database, and the war-gaming simulation components. - Work with Resource Sponsor divisions across OPNAV and Program Offices at NAVSEA, NAVAIR, and NAVWAR to refine inputs and data in the system. -Complete FAIT process and cyber requirements for establishing Secret accreditation and potential designation as a Warfare Mission Area. - Initiate contracted Pilot efforts and refine system requirements in agile environment. ***FY 2022 Base Plans:*** In FY22, FAIT requirements will be subsumed by the Warfighting Readiness Assessments - Force Level Integration solution. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease in FY22 Fleet Architecture Integration Tool (FAIT) due to requirements subsumed by the Warfighting Readiness Assessments - Force Level Integration solution.	0.000 -	3.608 -	0.000 -	0.000 -	0.000 -
Title: Warfighting Readiness Assessment - Force Level Integration (FLINT)	0.000	0.000	5.172	0.000	5.172

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
Articles:	-	-	-	-	-
FY 2021 Plans: N/A ***FY 2022 Base Plans:*** Starting in FY2022, the functionality developed under the FAIT pilots in FY21 is being subsumed by the Force Level Integration (FLINT) solution. FLINT is currently designated a pilot until Q2FY22. FLINT will leverage the Software Acquisition Pathway (SWAP) Pilot to Production approach to ensure rapid development and deployment of software. FLINT plans to enter into the SWAP execution phase at the conclusion of the pilot and will leverage agile software development methodologies, DevSecOps, and human-centered design processes to iteratively deliver software that will allow the program to meet OPNAV's priority needs. FY22 funding will continue agile development of the production environment. - Validate Warfighting and Readiness analytical capability requirements - Asses cyber security vulnerability - Conduct developmental testing to assess systems performance - Design interfaces and conduct data migration from NAVAIR SDREN to AWS IL6 - Agile development of Warfighting and Readiness analytical capabilities - RMF Assessment and Authorization (ATO) FLINT will interface with other systems to gather authoritative data and establish a wide reaching data set for the purpose of modeling and simulating requirements for POM planning. Migration of systems may not occur if an interface is not feasible or due to the classified nature of the data environment making subsuming of systems a better approach. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase in FY22 is due to realignment of budgeted funds under the FAIT program and is driven by additional costs associated with design interfaces and data migration from NAVAIR SDREN to AWS IL6.					
Accomplishments/Planned Programs Subtotals	37.245	39.365	41.305	0.000	41.305

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C. Other Program Funding Summary ($ in Millions)

Line Item	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
• 4A3M: *Civilian Human Capital Strategy*	0.000	0.000	3.900	-	3.900	-	-	-	-	-	-
• OPN LI 8106: *Command Support Equipment - LVC*	0.000	0.000	1.876	-	1.876	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

DONCIO IT will award option year 1 of the cost-plus-fixed-fee contract in September 2021, via the Naval Supply Systems Command (NAVSUP).

CHCS: Pilot programs will use existing government contracting vehicles, and competitive processes, where appropriate, to configure extant private-sector solutions to meet requirements and buy licenses to access those products.
ELECTRONIC PROCUREMENT SYSTEM (ePS)
The ePS program awarded a 10-year hybrid contract to a single System Integrator (SI). The vendor chosen was CGI Federal. CGI will provide required software licenses and required activities for program management, maintenance, systems engineering, design and interface development, testing, deployment, training, and support documentation. This includes all efforts through Full Deployment (FD) and continued sustainment support during the 10-year period of performance.

The ePS will leverage Commercial Off-the-Shelf (COTS) products and capabilities, and is anticipated to consist of three components to achieve full end-to-end capability: 1) a COTS Contract Writing System (CWS) solution; 2) a COTS middleware interfacing capability, known as an Enterprise Service Bus (ESB); and 3) Gap-closure methodologies (e.g.; Business Process Management tools (BPM), Business Process Re-Engineering (BPR), or COTS enhancements).

FLEET ARCHITECTURE INTEGRATION TOOL (FAIT)

There are existing Commercial-Off-the-Shelf (COTS) software and services that, with customization, can fulfill the Navy's modeling and simulation requirements for weapon system procurement planning. The program will employ a Pilot to Production approach using agile software development methodology.

LIVE VIRTUAL AND CONSTRUCTIVE (LVC) TRAINING DEVELOPMENT

LVC Training will leverage existing government contracts through NIWC Pacific, AIRFORCE and NAVAIR to provide integrated test facility, scenario development and experimentation on JCORE platform and Virtual Wizard Capability Build - Next Generation Threat Simulator (NGTS) platform interface/ experimentation.

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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
Software Development (Modernization)	C/FP	CACI : Chantilly, VA	4.555	0.000		0.000		0.000		-		0.000	-	-	-
Contractor Engineering Support (DONCJIS) (Modernization)	SS/T&M	Interimage Inc. : Manassas, VA	1.272	0.000		0.000		0.000		-		0.000	-	-	-
Software Development (Modernization)	C/FP	Dell Marketing LP : Round Rock, TX	1.938	0.000		0.000		0.000		-		0.000	-	-	-
Software Development (CLEOC) (Modernization)	C/FP	NSA : Various	0.500	0.000		0.000		0.000		-		0.000	-	-	-
SYSTEM Moderization (Modernizaation)	WR	NIWC LANT : CHARLESTON, SC	4.026	0.000		0.000		0.000		-		0.000	-	-	-
CORB SYSTEM Modernization (Modernization)	WR	NIWC LANT : CHARLESTON, SC	2.002	0.000		0.000		0.000		-		0.000	-	-	-
Software Development (Modernization)	C/CPFF	Booz Allen Hamilton (BAH) : McLean, VA	0.000	0.473	Sep 2020	0.407	Sep 2021	0.464	Sep 2022	-		0.464	-	-	-
Software Development (Modernization)	C/CPFF	SAIC : Reston, VA	1.039	0.000		0.000		0.000		-		0.000	-	-	-
CHCS Artificial Intelligence	TBD	TBD : TBD	0.000	0.000		0.000		0.840	Jul 2022	-		0.840	-	-	-
CHCS Digital HR	MIPR	Rock Island Arsenal : Rock Island, IL	0.000	0.000		0.000		0.800	May 2022	-		0.800	-	-	-
CHCS Predictive Analysis	TBD	TBD : TBD	0.000	0.000		0.000		0.100	Jul 2022	-		0.100	-	-	-
CHCS Learning Management System	TBD	TBD : TBD	0.000	0.000		0.000		0.039	Jun 2022	-		0.039	-	-	-
ePS Data Transition Strategy	Various	NAVSUP BSC : Mechanicsburg, PA	1.702	0.000		0.000		0.000		-		0.000	-	-	-
ePS NESB Data Mapping	C/FP	BOOZ ALLEN : Tysons Corner, Va	7.150	0.000		0.000		0.000		-		0.000	-	-	-
NESB Configuration and Validation	C/FP	NAVWAR : San Diego, CA	7.371	0.000		0.000		0.000		-		0.000	-	-	-
Contract Writing System (ePS)	C/FP	CGI Federal : Fairfax, VA	10.554	15.707	Mar 2020	21.573	Mar 2021	13.380	Mar 2022	-		13.380	-	-	-

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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
NERP Interface Analysis (ePS)	Various	NAVWAR : San Diego, CA	2.409	0.000		0.000		0.000		-		0.000	-	-	-
Fleet Architecture Integration Tool (FAIT)	Various	FFRDC/Various : Arlington, VA	0.000	0.000		3.608	Nov 2020	0.000		-		0.000	-	-	-
LVC Scenario Development and Training	C/FFP	NAVWAR NIWC PAC : San Diego, CA	0.000	0.000		0.000		1.500	Dec 2021	-		1.500	-	-	-
LVC Warrior Integration	FFRDC	MIT Lincoln Lab : Lexington, MA	0.000	0.000		0.000		3.951	Dec 2021	-		3.951	-	-	-
LVC Virtual Wizard / Next Generation Threat Simulator (NGTS)	WR	NAVAIR : Patuxent River, MD	0.000	0.000		0.000		1.500	Dec 2021	-		1.500	-	-	-
Force Level Integration (FLINT)	FFRDC	Georgia Tech Research Institute : Atlanta, GA	0.000	0.000		0.000		5.172	Mar 2022	-		5.172	-	-	-
		Subtotal	44.518	16.180		25.588		27.746		-		27.746	-	-	N/A

Remarks

Database development and modification for legacy, current, and future systems.

CHCS is a new start in FY 2022.
During FY22, the ePS program will begin Release 2 activities including interface development, gap closure activities, integration, testing, and data cleansing. R2 activities bring the remaining commands into the system.

Live, Virtual and Constructive (LVC) Training Development focuses on Engineering services via Naval research Development and Engineering (NRDE) for scenario development, experimentation builds, new app store bridging IW scenarios, curricula, tabletop exercise and war-gaming between Joint Cognitive Operations Research Environment (JCORE) architecture and end users. Virtual Wizard / Next Generation Threat Simulator (NGTS) provides a high level Navy Continuous Training Environment (CTE) compliant "sand box" to test, train and validate IW TTPs.
During FY 22, FAIT will award a production contract to a down-selected vendor from the pilot phase completion. The vendor will continue agile development of the production environment increasing FAIT capability.

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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
Acquisition Documentation (ePS)	C/IDIQ	MAGA : Washington, DC	3.734	0.000		0.000		0.000		-		0.000	-	-	-
Cost Analysis (ePS)	C/CPFF	NAVWAR : San Diego, CA	1.225	0.189	Jun 2020	0.189	Jun 2021	0.189	Jun 2022	-		0.189	-	-	-
Systems Engineering (ePS)	Various	NAVWAR : San Diego, CA/ Charleston, SC	17.650	4.670	Mar 2020	3.121	Mar 2021	3.121	Mar 2022	-		3.121	-	-	-
Logistics Analysis (ePS)	Various	NIWC LANT : Charleston, SC	4.606	0.438	Dec 2019	0.450	Dec 2020	0.450	Dec 2021	-		0.450	-	-	-
Requirements Validation (ePS) - Small Business set aside	C/FFP	NAVWAR : San Diego, CA	1.500	0.000		0.000		0.000		-		0.000	-	-	-
Project Management/ Implementation (ePS)	Various	Enterprise Horizion : San Francisco, CA	3.536	0.000		0.000		0.000		-		0.000	-	-	-
ePS Engineering Services - Small Business set aside	Various	Bowhead : Alexandria, VA	3.117	0.170	Jul 2020	0.170	Jul 2021	0.170	Jul 2022	-		0.170	-	-	-
ePS Testing and Validation/ Architecture Tool	Various	NSWC Dahlgren : Dahlgren, VA	0.100	0.000		0.000		0.000		-		0.000	-	-	-
System Engineering Support (NEST)	C/CPFF	Deloitte : Rosslyn, VA	9.161	7.917	Nov 2019	1.750	Nov 2020	0.000		-		0.000	-	-	-
(ePS) Project Management/ Implementation	C/CPFF	Chenega : Chesapeake, VA	0.604	0.650	Sep 2020	0.650	Sep 2021	0.650	Nov 2021	-		0.650	-	-	-
Cloud Broker Services (ePS)	C/CPFF	NAVAIR : Patuxent River, MD	0.517	3.900	Jun 2020	4.400	Jun 2021	4.432	Jun 2022	-		4.432	-	-	-
ePS engineering services	C/CPFF	Falconwood : Arlington, VA	0.373	1.310	May 2020	1.226	May 2021	1.226	May 2022	-		1.226	-	-	-
		Subtotal	46.123	19.244		11.956		10.238		-		10.238	-	-	N/A

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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
Test and Evaluation	C/CPFF	Booz Allen Hamilton (BAH) : McLean, VA	0.000	0.200	Sep 2020	0.200	Sep 2021	0.200	Sep 2022	-		0.200	-	-	-
Testing Preparations (ePS)	C/FFP	NIWC LANT : Charleston, SC	0.800	0.000		0.000		0.000		-		0.000	-	-	-
Software Hosting (ePS)	C/FP	NAVWAR : San Diego, CA	0.815	0.000		0.000		0.000		-		0.000	-	-	-
Testing (ePS)	C/FP	OPTEVFOR : NORFOLK,VA	0.538	0.674	Aug 2020	0.674	Aug 2021	0.674	Aug 2022	-		0.674	-	-	-
Testing (ePS)	MIPR	JITC : Ft. Huachuca, AZ	0.000	0.424	Mar 2020	0.424	Mar 2021	0.424	Mar 2022	-		0.424	-	-	-
Testing/Cyber	C/CPFF	Falconwood : Arlington, VA	0.509	0.523	May 2020	0.523	May 2021	0.523	May 2022	-		0.523	-	-	-
		Subtotal	2.662	1.821		1.821		1.821		-		1.821	-	-	N/A

Remarks

Assessment and Authorization (A&A) requirements.
FAIT is an abbreviated acquisition program and does not require Independent Operational Test Evaluation (IOTE). Testing is performed in accordance with approved test plans by the business owners.

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
ePS Program Support	C/FFP	PEO MLB : Arlington, VA	0.500	0.000		0.000		0.000		-		0.000	-	-	-
LVC Program Management	C/FFP	NIWC PAC : San Diego, CA	0.000	0.000		0.000		1.500	Dec 2021	-		1.500	-	-	-
		Subtotal	0.500	0.000		0.000		1.500		-		1.500	-	-	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	93.803	37.245		39.365		41.305		-		41.305	-	-	N/A

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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

Remarks

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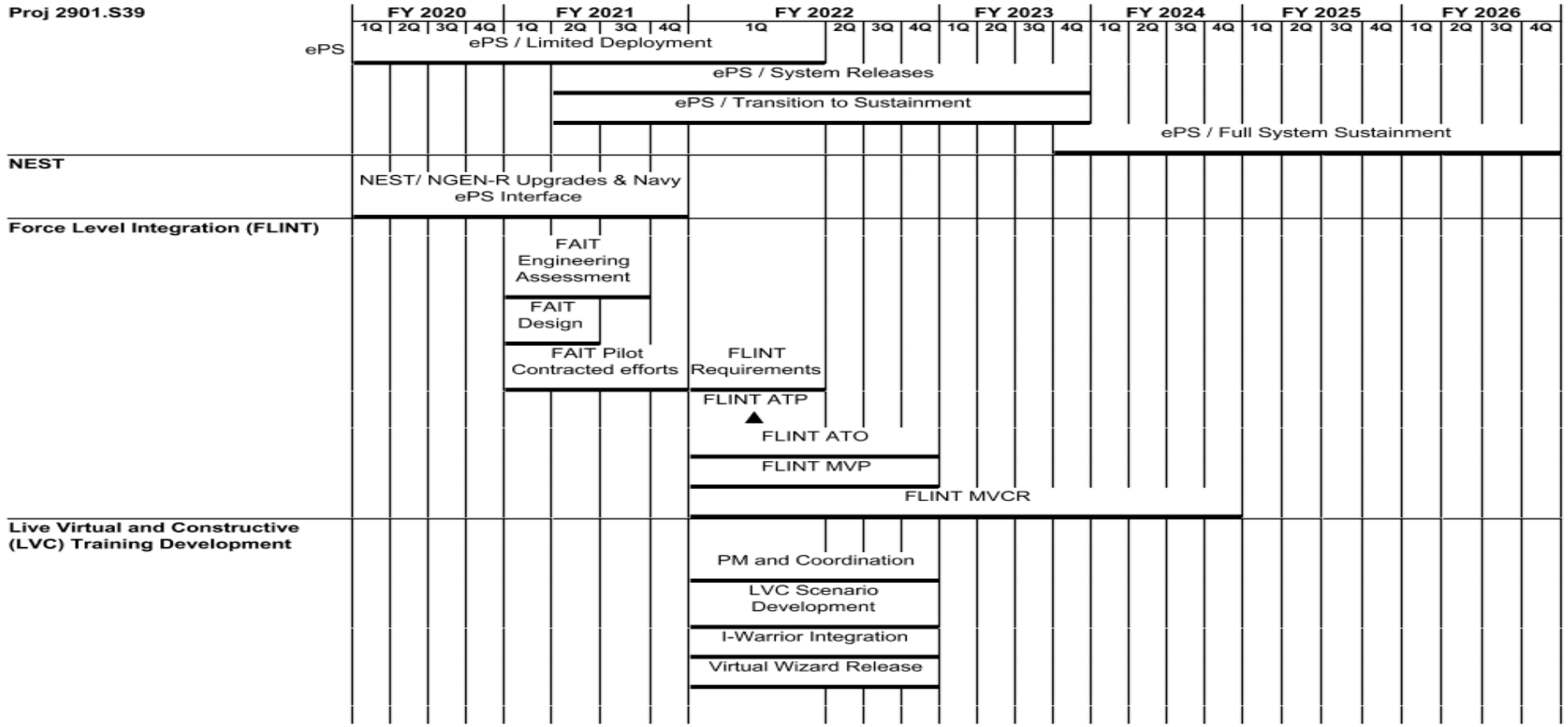

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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2901.L12				
SECNAV Projects IT System Modernization: Technology Development	1	2020	4	2022
SECNAV Projects IT System Modernization: System Development & Demonstration	1	2020	4	2022
SECNAV Projects IT System Modernization: System Testing	1	2020	4	2022
SECNAV Projects IT System Modernization: Production & Deployment	1	2020	4	2022
Civilian Human Capital Strategy: Pre-implementation / Configuration Preparations	1	2022	4	2022
Civilian Human Capital Strategy: Implementation / Configuration	3	2022	4	2022
ePS: ePS / Conduct Limited Deployment	1	2020	1	2022
ePS: ePS / Deploy System Releases	2	2021	4	2022
ePS: ePS / Transition to Sustainment	2	2021	4	2022
NEST: NEST/ NGEN-R Upgrades and Navy ePS Interface	1	2020	4	2021
Force Level Integration (FLINT): FAIT Engineering Assessment	1	2021	3	2021
Force Level Integration (FLINT): FAIT Design	1	2021	2	2021
Force Level Integration (FLINT): FAIT Pilot	1	2021	4	2021
Force Level Integration (FLINT): FLINT Warfighting and Readiness analytical capability requirements validation	1	2022	1	2022
Force Level Integration (FLINT): FLINT Pilot ATP 2	1	2022	1	2022
Force Level Integration (FLINT): FLINT Authority to Operate	1	2022	4	2022
Force Level Integration (FLINT): FLINT Minimum Value Produut (MVP)	1	2022	4	2022
Force Level Integration (FLINT): FLINT Data Enviroment Development	1	2022	4	2022
Force Level Integration (FLINT): FLINT Warfighting and Readiness analytical capabilities Minimum Value Capabilty Release (MVCR)	1	2022	4	2022

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *Navy Enterprise IT*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Live Virtual and Constructive (LVC) Training Development: LVC Program Management and Coordination	1	2022	4	2022
Live Virtual and Constructive (LVC) Training Development: LVC Scenario Development	1	2022	4	2022
Live Virtual and Constructive (LVC) Training Development: I-Warrior Integration	1	2022	4	2022
Live Virtual and Constructive (LVC) Training Development: Virtual Wizard Release	1	2022	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy												Date: May 2021
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				Project (Number/Name) 2903 / *NAVAIR IT*			
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**
2903: *NAVAIR IT*	44.167	18.767	7.776	4.683	-	4.683	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Configuration Management System (CMS) - This program was originally identified as Joint Configuration Management Information System (JCMIS) to reflect the main software tool used for component tracking and Aircraft Configuration Management. However, as the available data sources from the fleet have expanded, the new name of CMS was chosen to better acknowledge the variety of information sources which are received, integrated, and compiled to give the most accurate component record data and aircraft configuration. CMS serves as the Program of Record (POR) to manage and control Navy and Marine Corps aviation component data reconstruction efforts. CMS compiles record data via fleet documentation of component updates and captures this information via a centrally managed database within the current software tool, Joint Configuration Management Information System (JCMIS). CMS efficiently manages product structure data, including complex interrelationships between assemblies and subassemblies, technical documentation and the parts that comprise the item. Accurate, complete and accessible configuration data is critical to the successful operations of DoD weapon systems or tracked assets. Mission readiness and operational capabilities are enhanced by CMS, as consistent integrated configuration data is readily available to operators, maintainers and logistics personnel. CMS provides users with a common database infrastructure to ensure compatibility, quality, and consistency of Configuration Management (CM) processes and provides configuration managers and analysts the validated CM information necessary for accurate maintenance, spare procurements, reliability and safety analysis, and mission readiness. Funding is budgeted to support the services of re-hosting and testing of Commercial off-the-shelf (COTS) upgrades to ensure objective performance of CMS is achieved.

Navy Cybersecurity - Cyber Warfare consists of many different aspects to include sabotage of our weapon systems, networks as well as enablement of missions. Nation and non-nation state actors are acquiring and employing more advanced cyber-attacks in order to exploit our networks and aviation systems challenging our technological edge. The threats and capabilities are real and range from exploiting capabilities, overloading weapons systems and logistics supply chains, to jamming signals or taking control of weapons systems. We must defend against adversarial cyber attacks while contributing to the exploitation of cyber warfare capabilities.

To meet these challenges and address the Chief of Naval Operations priorities and tasking, these R&D efforts are specifically focused on Naval Air Systems Command weapon or control systems and programs to ensure warfighting effectiveness as part of integrated / multi-platform kill chains. These research and development efforts will strengthen our cyber posture by developing research, development, test and evaluation capabilities and solutions to deter, detect, and mitigate cyber threats and safeguard classified naval aviation systems and platforms from "cradle to grave." These solutions will be integrated into the acquisition of weapons systems to enhance security, increase lethality, and improve resiliency in the expected operational environments. Our weapon or control systems are unique in the aforementioned environments and mission, but also in the presence of numerous non-traditional access points and trusted cyber relationships required for operational environments.

Digital Thread (DT)- Capability provides digital process integration with complete, secure and authoritative data, coordinated as part of approved Navy LOG-IT. DT integrates the product life cycle to provide universal access to authoritative data and workflow automation, enabling configuration management of data, implementation of closed loop quality, and consolidation of engineering products including digital enablement of additive manufacturing. Connecting these processes using standardized digital tools and data accelerates the product development cycle and lowers costs for support and new capability integration. The Digital Thread capability includes

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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development and demonstration of cyber security architectures for sustainment information systems, and development of a digital/additive manufacturing data architecture and repository.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: CMIS Annual Software Release	0.621	0.603	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2021 Plans: CMS will maintain the existing CMIS system refresh posture while leveraging best practices to maximize component data accuracy and integrity. Analyze and optimize system functionality, input and presentation capabilities in order to improve data reconstruction efforts for fleet requestors. Investigate capability improvements provided by technological advancements such as digital upload of information, exchange of data with other fleet systems of record, incorporation of other component data sets and input formats, improving fleet serial number tracking processes and other approaches to improve fleet readiness and safety postures. Continue to respond to evolving threats, new vulnerabilities, and changing DON Cyber Security policy to ensure adequate continued system software and architecture security. Continue generation of solutions and mitigation plans for vulnerabilities identified during system assured compliance assessment solution scans. Continue monitoring for changes and compliance with new security technical implementation guided checklists and security content automation protocol results as required by security policies. Continue to monitor and ensure Section 508 compliance within system as new features are enabled, or new compliance guidance is released. Continue timely and efficient system and/or software solutions in response to customer/fleet requests that involve modification/updates to system software/architecture. Procure COTS licenses as needed when increased users are added for fleet data entry.					
FY 2022 Base Plans: N/A					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement: Decrease in FY22 due to the migration of capabilities to Aviation Logistics Environment (ALE). This will enable CMIS to be incorporated into the ALE Aviation Product Lifecycle Management and Maintenance Engineering Ground Station For Aviation (MEGA)tools.					
Title: Navy Cybersecurity	4.503	4.684	1.778	0.000	1.778
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
FY 2021 Plans: - Broad Agency Announcement (BAA) new awards and continuation for the development, demonstration, and transition of cyber security solutions across identified critical technology areas. - Continue augmentation and maturation of laboratory capabilities, environments and customized toolsets across multiple NAVAIR sites and facilities to conduct cyber security Research, Development, Test and Evaluation (RDT&E) for NAVAIR programs. - Continued development aviation weapon systems customized tools, methodologies, and procedures identified from Cyber Risk Assessments, Cyber Table Tops, test and evaluation capability gaps and emergent threats. Increased program and Fleet support capability for penetration testing, hands on adversarial assessments, and engineering investigations. - Continued support of emergent Fleet Cyber Command/10th Fleet (FLTCYBERCOM/C10F) Operations Orders (OPORD) and Tasking Orders (TASKORD) requiring urgent development of cyber incidence planning and response capability and customized weapon and control systems solutions for identified Fleet risks. - Increased FY21 capability investment directly supports emergent intelligence, FLTCYBERCOM/C10F OPORDs/TASKORDs, Blackbeard After Action Report (AAR), Cyber Risk Assessments of Aviation Weapons Systems and Platforms, Aviation Resiliency, incident response investigations, Cyber Supply Chain risk management (SCRM) and hardening, and OSD Defense Science Board Task Force for Cyber Deterrence recommendations. Without this capability investment the US Navy will continue to be vulnerable to attacks on its nontraditional systems (e.g., Aircraft, Weapons, Radars, Aircraft Launch and Recovery Equipment (ALRE)) and will result in significant residual risk to aviation combat systems.					
FY 2022 Base Plans: - Broad Agency Announcement (BAA) new awards and continuation for the development, demonstration, and transition of cyber security solutions across identified critical technology areas. - Continue augmentation and maturation of laboratory capabilities, environments and customized toolsets across multiple NAVAIR sites and facilities to conduct cyber security Research, Development, Test and Evaluation (RDT&E) for NAVAIR programs. - Continued development aviation weapon systems customized tools, methodologies, and procedures identified from Cyber Risk Assessments, Cyber Table Tops, test and evaluation capability gaps and emergent threats. Increased program and Fleet support capability for penetration testing, hands on adversarial assessments, and engineering investigations.					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Continued support of emergent Fleet Cyber Command/10th Fleet (FLTCYBERCOM/C10F) Operations Orders (OPORD) and Tasking Orders (TASKORD) requiring urgent development of cyber incidence planning and response capability and customized weapon and control systems solutions for identified Fleet risks. - Increased FY22 capability investment directly supports emergent intelligence, FLTCYBERCOM/C10F OPORDs/TASKORDs, Blackbeard After Action Report (AAR), Cyber Risk Assessments of Aviation Weapons Systems and Platforms, Aviation Resiliency, incident response investigations, Cyber Supply Chain risk management (SCRM) and hardening, and OSD Defense Science Board Task Force for Cyber Deterrence recommendations. Without this capability investment the US Navy will continue to be vulnerable to attacks on its nontraditional systems (e.g., Aircraft, Weapons, Radars, Aircraft Launch and Recovery Equipment (ALRE)) and will result in significant residual risk to aviation combat systems. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The decrease of $2.893M in FY22 will limit support in development aviation weapon systems customized tools, methodologies, and procedures.					
Title: Digital Thread	13.643	2.489	2.905	0.000	2.905
Articles:	-	-	-	-	-
FY 2021 Plans: Extend DT-IDRN capabilities to overall processes including digital engineering data, integrated quality management, digital manufacturing connectivity. Develop and implement digital workflows to accelerate processes and manage digital technical data. Integrate Program Management Activity (PMA) Product Life Cycle (PLM) systems with IDRN to manage digital technical data for key platforms. Create additional networked capability to extend information across digital platforms. Expand and extend capability for DT to allow for Additive Manufacturing (AM) Integration for cybersecure capacity expansion to meet fleet requirements. ***FY 2022 Base Plans:*** Extend DT-IDRN capabilities to overall processes including digital engineering data, integrated quality management, digital manufacturing connectivity. Continue development and implementation of digital workflows to accelerate processes and manage digital technical data. Continue integration of IDRN requirements into AvPLM to manage digital technical data for key platforms. Create additional networked capability to extend					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
information across digital platforms. Expand and extend capability for DT to allow for Additive Manufacturing (AM) Integration for cybersecure capacity expansion to meet fleet requirements. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase in FY22 due to expansion of Additive Manufacturing digital enablement.					
Accomplishments/Planned Programs Subtotals	18.767	7.776	4.683	0.000	4.683

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The Configuration Management System (CMS) Program used Joint Logistics Systems Center (JLSC) funds to evolve JCMIS to Software Release 5.0. In June 1998 JCMIS was transferred to the Navy as executive agent and NAVAIR as program manager. Program Budget Decision 401 transferred joint funding from JLSC to NAVAIR. The CMS Program Manager continues to evolve the program to keep pace with cost, changing business processes, data integration, and evolving commercial and military standards. Various contractors using competitively awarded contracts have supported the program.

Navy Cybersecurity - The Navy Cybersecurity strategy is in 3 concurrent steps:
1. Broad Agency Announcements (BAA) for resilient cyber warfare capabilities and control system solutions for NAVAIR Weapon Systems. Draft BAA delineating Naval Research Areas of Interest; Specific Areas of Interest; Technologies Being Sought; Proposal Submission; Proposal Abstracts; Full Proposal; General Information, and Evaluation Criteria.
The objective of the BAA is principally to orchestrate germane research and development to fill the gaps in cyber warfare capabilities for Naval Air Systems Command (NAVAIR) weapon systems, i.e., secure weapon systems able to survive and exploit cyber warfare. Areas of interest include but not limited to:
1) SWaP sensitive cyber resiliency for RTOS and aviation warfare environment
2) Access point identification, prioritization and defense
3) Cyber-Electronic Warfare convergent capabilities
4) Full acquisition cycle cyber security measures
5) Cyber test, inspection, incident response and training tools
6) Cyber warning systems
7) Cyber fault, risk and threat assessment methodologies

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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2. Advanced Cyber Lab (ACL)
Achieve capability to respond to cyber incidents, conduct federated avionics penetration tests in support of cyber risk assessments and develop control system solutions for NAVAIR weapon systems and acquisition programs. Assessing BAA solutions for Naval Aviation. Acquire delineated specialized equipment, software tools, space, power, cooling, and security.
1) Secure Messaging - Cryptography, Steganography, etc.
2) Embedded Operating System Threat Assessment, Software Reverse Engineering, Federated Penetration Testing of Custom Control Systems
3) Advanced Anti-tamper, Digital Forensics
4) Microelectronics Reverse Engineering
5) Capabilities in response to Denial of Service, Precision Direct Attack/ Root Kits, Interdiction / Data in transit and Infrastructure / SCADA attacks.
6) Portable Assessment and Test

3. Organic Cyber Solutions for NAVAIR Customized Control Systems
Project investigation and development or tools and tailored solutions for our control systems and improve the cyber security at control system entry points will be completed. Areas discovered include but are not limited to:
1) Intrusion Detection / Prevention Systems (IDS/IPS) for Real Time systems
2) Live-CD boot
3) Out of Band Monitoring & Authentication
4) Weapon System of Systems Architecture tools
5) Avionics Fuzzing
6) Federated Penetration Testing Tool Set & Non-Destructive Inspection Tool
7) Dynamic Network Maneuvering
8) Weapon System Side Channel Analysis

Digital Thread - Digital Thread/Cyber Security Architecture and Strategy
The management approach includes the Logistics IT Portfolio Management Office residing in NAVAIR as part of Program Executive Office for Aviation Common Systems and Commercial Services (PEO(CS)).
1) Develop cyber security architecture standards for Naval Aviation Environment (NAE) Digital Thread.
2) Develop IT and data architecture for NAE Digital Thread to accelerate maintenance and sustainment and support digital manufacturing capabilities including design, manufacturing, and materials data.
3) Implement cyber security architecture for NAE Digital Thread including COMFRC, Logistics IT, PMAs.
4) Implement Phase 1 of NAE Digital Thread Integrated Digital Resource Network (DT-IDRN) at D-level locations.
5) Stand up developmental digital manufacturing data repository that includes digital design and digital material database.
6) Integrate digital manufacturing data repository into DT-IDRN.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
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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
Solutions for Cyber Warfare Capabilities for Navy Cybersecurity	Various	Various : Various	13.344	2.050	Oct 2019	1.637	Oct 2020	0.273	Oct 2021	-		0.273	-	-	-
Solutions for Digital Thread	Various	Various : Various	10.823	10.126	Oct 2019	1.192	Oct 2020	2.231	Oct 2021	-		2.231	-	-	-
		Subtotal	24.167	12.176		2.829		2.504		-		2.504	-	-	N/A

Remarks

Digital Thread increase in FY22 reflects planned shift of resources to product development increasing capability deliveries.

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
Prior year Prod Def no longer funded in the FYDP	Various	Various : Various	1.869	0.000		0.000		0.000		-		0.000	-	-	-
Software Support for Configuration Management Information System (CMIS)	C/FFP	KBR : Lexington Park, MD	1.511	0.000		0.404	Nov 2020	0.000		-		0.000	-	-	-
Software Support for Configuration Management Information System (CMIS)	Various	Various : Various	0.000	0.493	Mar 2020	0.101	Feb 2021	0.000		-		0.000	-	-	-
		Subtotal	3.380	0.493		0.505		0.000		-		0.000	-	-	N/A

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 Support for Configuration Management Information System (CMIS)	WR	NAWCAD : Patuxent River, MD	1.558	0.128	Dec 2019	0.098	Dec 2020	0.000		-		0.000	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*

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
Systems Engineering Support for Navy Cybersecurity	WR	NAWCAD : Patuxent River, MD	10.531	1.801	Oct 2019	2.941	Oct 2020	1.455	Oct 2021	-		1.455	-	-	-
Systems Engineering Support for Digital Thread	WR	NAWCAD : Patuxent River, MD	2.858	3.517	Oct 2019	1.303	Oct 2020	0.674	Oct 2021	-		0.674	-	-	-
Systems Engineering Support for Navy Cybersecurity	WR	NAWCWD : China Lake, CA	1.673	0.652	Oct 2019	0.100	Oct 2020	0.050	Oct 2021	-		0.050	-	-	-
		Subtotal	16.620	6.098		4.442		2.179		-		2.179	-	-	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	44.167	18.767		7.776		4.683		-		4.683	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*

Navy Cybersecurity– Project 2903 Schedule

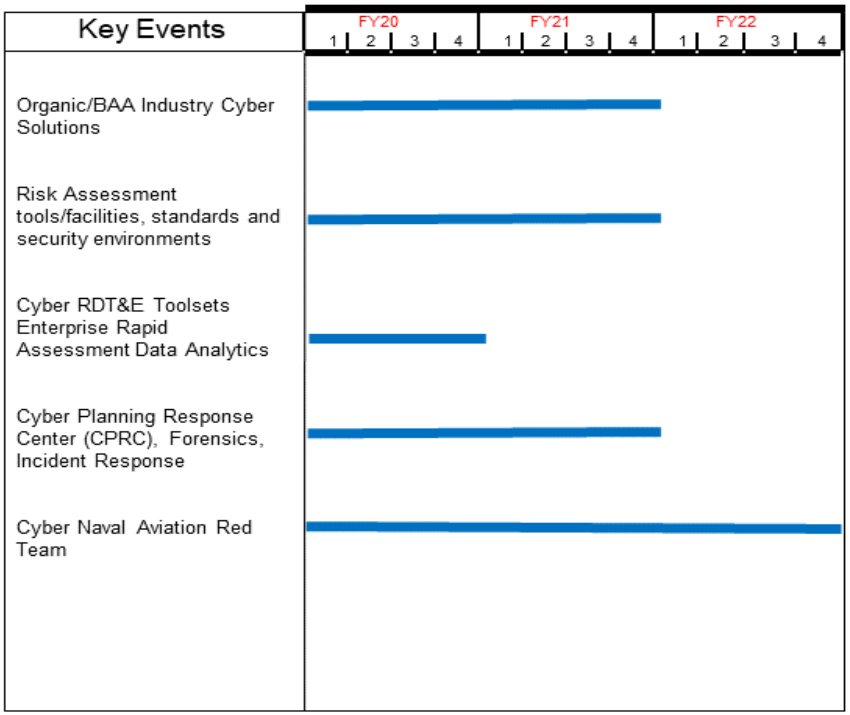

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*

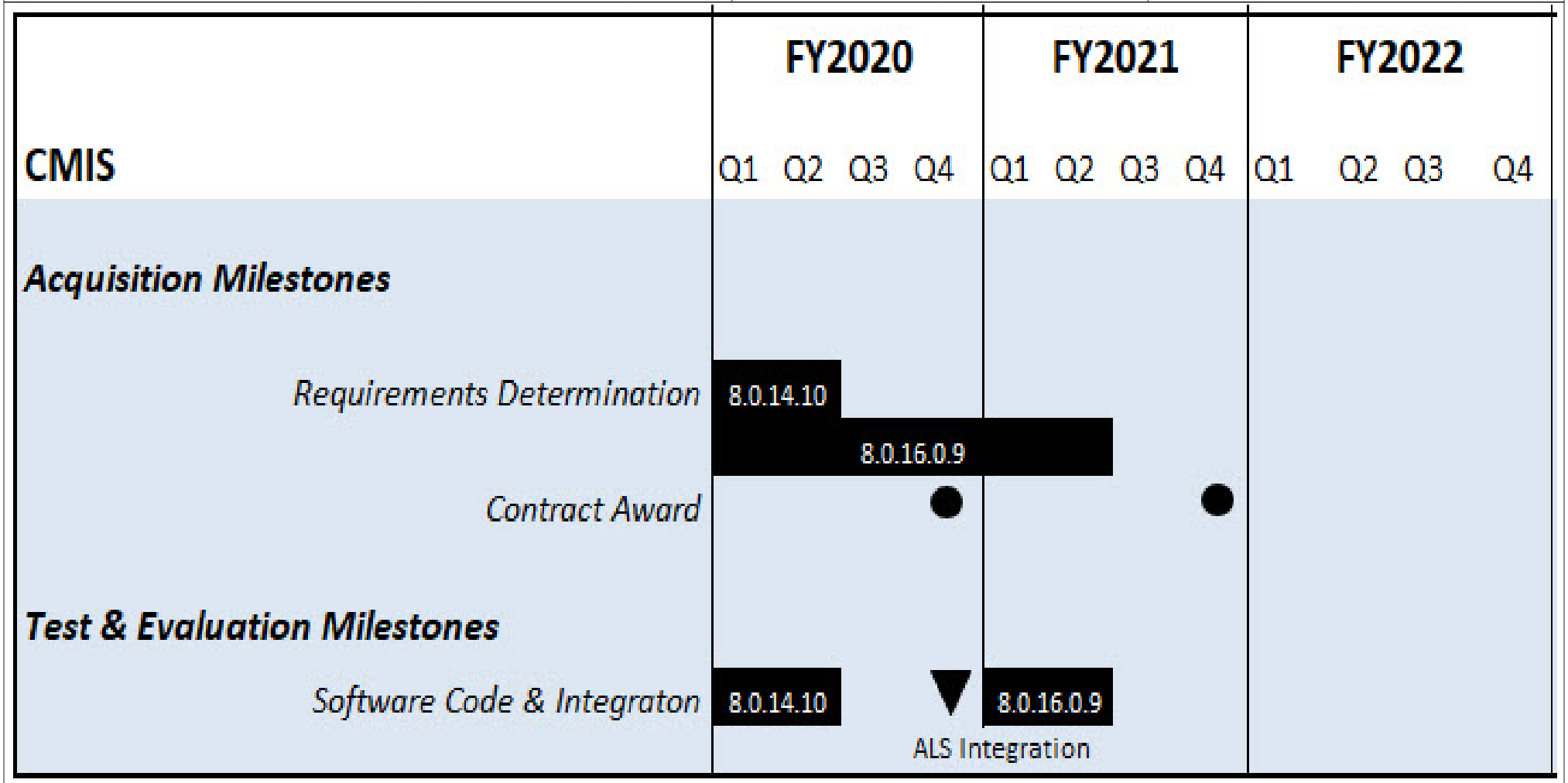

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*

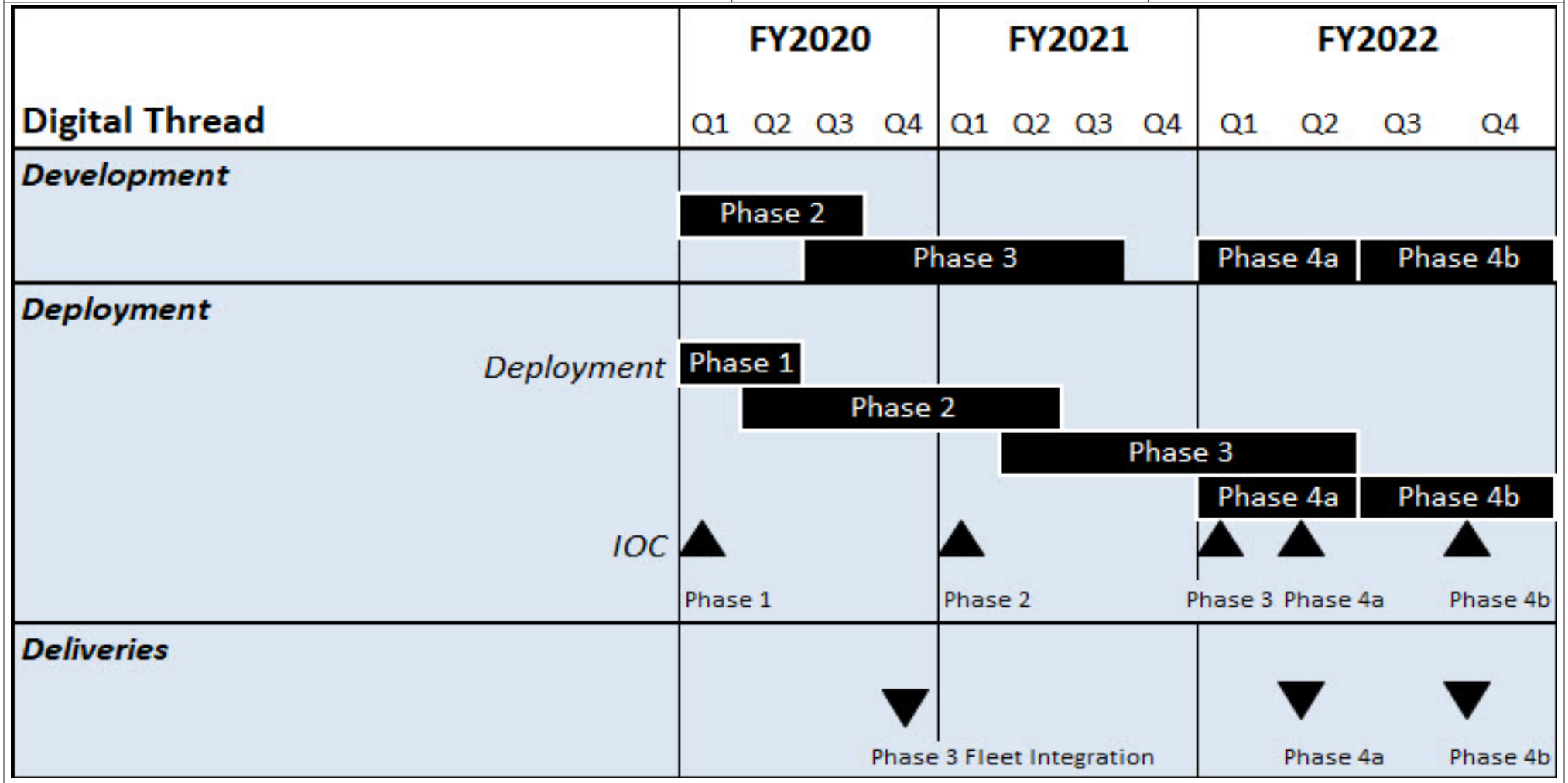

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
NAVAIR IT				
Requirements Determination: Release 8.0.14.10	1	2020	2	2020
Requirements Determination: Release 8.0.16.0.9	1	2020	2	2021
Contract Award: Contract Award, Release 8.0.14.10	4	2020	4	2020
Contract Award: Contract Award, Release 8.0.16.0.9	4	2021	4	2021
Development: Software Code & Integration: Release 8.0.14.10	1	2020	3	2020
Development: Software Code & Integration: Release 8.0.16.0.9	1	2021	3	2021
Development: Software Code & Integration: Functionality Improvement: Component Data Entry with AutoLogSet (ALS) Integration	4	2020	4	2020
Navy Cybersecurity				
Advanced Cyber Labs: Support Organic/BAA industry solutions: Organic/BAA industry cyber solutions	1	2020	4	2021
Advanced Cyber Labs: Support Organic/BAA industry solutions: Risk Assessment tools/facilities, standards and security environments	1	2020	4	2021
Advanced Cyber Labs: Support Organic/BAA industry solutions: Cyber RDT&E Toolsets	1	2020	4	2020
Advanced Cyber Labs: Support Organic/BAA industry solutions: Cyber Planning and Response Center (CPRC), Forensics, Incident Response	1	2020	4	2021
Advanced Cyber Labs: Support Organic/BAA industry solutions: Cyber Naval Aviation Red Team	1	2020	4	2022
Digital Thread				
Requirements Determination	1	2020	4	2022
Development: Digital Thread Development: Digital Thread Capability Development Extended (Phase 2)	1	2020	3	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Development: Digital Thread Development: Digital Thread Capability Development Fleet Integration (Phase 3)	3	2020	3	2021
Development: Digital Thread Development: Digital Thread Capability Development Updates (Phase 4a)	1	2022	2	2022
Development: Digital Thread Development: Digital Thread Capability Development Updates (Phase 4b)	3	2022	4	2022
Deployment: Digital Thread Deployment: Digital Thread Deployment Initial (Phase 1)	1	2020	2	2020
Deployment: Digital Thread Deployment: Digital Thread Deployment Extended (Phase 2)	2	2020	2	2021
Deployment: Digital Thread Deployment: Digital Thread Deployment Fleet Integration (Phase 3)	2	2021	2	2022
Deployment: Digital Thread Deployment: Digital Thread Deployment New/Updates (Phase 4a)	1	2022	2	2022
Deployment: Digital Thread Deployment: Digital Thread Deployment New/Updates (Phase 4b)	3	2022	4	2022
Deployment: Digital Thread Deployment: Digital Thread Phase 1 IOC	1	2020	1	2020
Deployment: Digital Thread Deployment: Digital Thread Phase 2 IOC Extended	1	2021	1	2021
Deployment: Digital Thread Deployment: Digital Thread Phase 3- IOC FMC	1	2022	1	2022
Deployment: Digital Thread Deployment: Digital Thread Phase 4a IOC	2	2022	2	2022
Deployment: Digital Thread Deployment: Digital Thread Phase 4b IOC	4	2022	4	2022
Deliveries: Digital Thread Fleet Integration (Phase 3)	4	2020	4	2020
Deliveries: Digital Thread New/Updates (Phase 4a)	2	2022	2	2022
Deliveries: Digital Thread New/Updates (Phase 4b)	4	2022	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				Project (Number/Name) 2904 / *NAVSEA IT*			
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**
2904: *NAVSEA IT*	264.840	19.671	22.408	16.579	-	16.579	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Navy Maritime Maintenance Enterprise Solution (NMMES) is the Information Technology (IT) toolset currently utilized to execute ship and submarine maintenance in the Naval Shipyards (NSY), Regional Maintenance Centers (RMC), Ship Repair Facility (SRF), Intermediate Maintenance Facilities (IMF), Forward Deployed Regional Maintenance Center, and commercial industrial sites worldwide. These maintenance activities support Fleet operations 24 hours per day, 7 days per week. The NMMES IT solution is used by over 40,000 civilians and military who conduct over $8.9B of ship, aircraft carrier, and submarine maintenance and modernization on an annual basis.

The NMMES program includes sustainment as well as multiple modernization efforts to insure the continued effectiveness of the Fleet maintenance IT toolset. These efforts consist of adding mandatory enhancements, such as Financial Improvement and Audit Readiness (FIAR) changes and aligning with the Standard Accounting Budget Reporting System (SABRS) system. The NMMES program provides for software changes, retiring and/or replacing of costly legacy applications, transition planning, and systems engineering for integration with existing and future solutions. These efforts align with direction to insure that proposed interim solutions support and facilitate the transition to the planned maintenance solution end state. This program will provide modernization, migration, testing, and consolidation of obsolete IT tools and code base to the next generation of centrally hosted tools supporting Fleet Maintenance systems for the Navy. Funding for NMMES PU 2904 addresses critical deficiencies and minimizes the inherent risks that a catastrophic failure would be to fleet readiness. The funds are required to support the modernization of products that are on outdated software, align maintenance applications and processes with evolving shipbuilding techniques, and enhance the existing applications to make them cloud capable. It also provides for software enhancements required to make applications Financial Improvement and Audit Readiness (FIAR) compliant and to enable system modifications of financial feeder applications to interface with a FIAR compliant system of record. The requirement to handle 3-D integrated product models being delivered with CVN-78, Virginia Class and Columbia Class are also driving the requirement. NAVSEA plans to execute these funds primarily through a current sustainment contract and several separate contracts through existing delivery orders to gain the specialized resources and material necessary to sustain these vital functions.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**
Title: Project Sequencing & Scheduling (PSS) Upgrade	1.450	0.635	0.500	0.000	0.500
Articles:	-	-	-	-	-
Description: The PSS scheduling application provides the naval shipyards (Portsmouth Naval Shipyard, Puget Sound Naval Shipyard & IMF, Pearl Harbor Naval Shipyard & IMF, and Norfolk Naval Shipyard) with a customized, flexible scheduling tool for Chief of Naval Operations maintenance availabilities and other maintenance, repair and overhaul work assigned to the activities in support of the first phase of the Optimized					

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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
Fleet Response Plan. Key system objectives include: 1) Standardization of the scheduling processes and tools; 2) Creation of dates for use in the NMMES project management software; 3) Generation of user and management reports covering all aspects of scheduling of a ship or submarine availability. The current PSS application is based on a proprietary commercial product originally acquired over 25 years ago. The application is outdated and the vendor has informed the Navy that it will no longer be supported in the near future requiring Navy to pursue an immediate upgrade to a supportable product, while not interrupting maintenance availabilities. The product had already become increasingly difficult to maintain and with the pending loss of vendor support could lead to catastrophic system failure and loss of ability to maintain project schedules. ***FY 2021 Plans:*** Continue with the testing and implementation of the replacement Commercial Off The Shelf (COTS) product. Conduct training of the user community in the use of the PSS replacement product. Begin configuration for maintenance support functions not currently included in the critical chain scheduling functions across shipyard availabilities. Identify scheduling and sequencing requirements for lifting and handling to conduct analysis to identify configuration and integration tasks into single NSY scheduling tool. ***FY 2022 Base Plans:*** Continue work with new scheduling product vendor to configure product enhancements based on data analysis and continuous improvement process requirements and Fleet recommendations. Begin configuration by lifting and handling sequencing requirements. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decreased by $ 0.135M as critical chain/critical path configuration efforts are slowly ramped down/ completed and continued analysis occurs.					
Title: electronic Technical Work Document (eTWD)	1.783	3.945	1.186	0.000	1.186
Articles:	-	-	-	-	-
Description: The eTWD Initiative is a NAVSEA Sponsored, Chief of Naval Operations (CNO) approved Reduction in Total Ownership Cost (RTOC) Initiative to establish interactive electronic Technical Work Document (eTWD) capability for use in the naval shipyards. An eTWD will be used to execute maintenance, repair, overhaul and modernization work packages on ships and submarines undergoing major availabilities in naval shipyards. This solution will provide paperless work packages, pulling authoritative data from the existing					

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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
NMMES applications supporting ship maintenance. The interactive electronic work instruction will be used at the jobsite replacing the current paper based instructions. The overall goal for eTWD is twofold: 1) to reduce the resources and time preparing, executing and certifying work instructions; and 2) enable the non-stop execution of work by having online documents and drawings accessible for problem resolution. The eTWD Initiative is in progress. ***FY 2021 Plans:*** The eTWD system is scheduled to conduct and complete Government Acceptance Testing event followed by a Production Readiness Review. eTWD Go Live with individual shipyards will occur as each shipyard migrates onto Maritime Systems Environment (MSE) at the Component Enterprise Data Center (CEDC) in Charleston, SC. Sustainment Plan strategy to be finalized and implemented when eTWD contract ends to support long-term eTWD solution sustainment. ***FY 2022 Base Plans:*** The follow-on modules will be initiated based on the success during government testing and evaluation. The functionality will include interfaces with the systems of record that are utilized for work brokering and the development and implementation of class maintenance plans. This will then lead to the ability to compare work plans against the varied configurations across ship/sub classes in future years. The existing functionality will move into the NMMES sustainment operational baseline. Planning for deployment to the Intermediate Level activities will begin. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decreased by $2.759M due to deployments being ramped down. The timeline shifted due to the focus on DON COST SABRS and DISA circuit installs, which permitted centralized data hosting.					
Title: Planned Maintenance System (PMS) Upgrade	1.495	1.525	1.495	0.000	1.495
Articles:	-	-	-	-	-
Description: The Planned Maintenance System Management Information System (PMS MIS) is an upgraded web-based solution that tracks the status of all Maintenance Index Pages (MIPs) and Maintenance Requirements Cards (MRCs). This includes new and revised documentation allowing for Technical Feedback Report (TFBR) generation and tracking from initial reporting to problem resolution, management of activity documentation distribution information, document development history including Reliability-Centered					

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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
Maintenance (RCM) information and other data needed to support all forms of planned maintenance in the Fleet. PMS MIS will interface with authoritative configuration and logistics management databases allowing for Equipment Maintenance Plans (EMPs) to reflect actual ship or unit configuration. These EMPs will be created by ashore maintenance managers eliminating tailoring by ships' force. The upgraded PMS Scheduler (PMS SKED) is designed to consume configuration specific O-Level Maintenance Plans and MRCs by afloat platforms to ease administrative burdens associated with Force Revision processing and equipment to PMS associations. The existing processes require excessive sailor and shore expert administrative burden creating complex and ambiguous documents and extensive time to implement changes. As a result, improper execution of equipment maintenance can occur. Additionally, leadership lacks the tools to monitor program implementation and assure satisfactory performance. Furthermore, the existing processes do not support distributed and optimally manned ship concepts of operation such as those now used by the Naval Expeditionary Combat Command and the Littoral Combat Ship. The future PMS upgrade will provide visibility to shore maintenance leaders ensuring equipment is consistently scheduled throughout the fleet and execution issues are identified. ***FY 2021 Plans:*** The remaining development and testing of PMS MIS and PMS SKED is expected to be completed. PMS MIS user testing will be completed and PMS MIS (IOC) will be delivered into a Navy production environment. Interfacing with the Navy Maintenance, Repair and Operations (MRO) team to incorporate PMS Scheduling functionality and conduct shipboard pilots by end of FY21 is also expected. Continue utilizing spiral development philosophy to incorporate PMS MIS IOC enhancements. ***FY 2022 Base Plans:*** The Ships' 3-M development efforts will begin in FY22 and the complete end-to-end testing and deployment will conclude prior to the end of FY23. Upon successful completion of the pilots (in conjunction with Navy MRO), the upgraded PMS SKED will be delivered to the Navy production environment for afloat and ashore users. The spiral development philosophy will continue to be used to incorporate PMS MIS and PMS SKED IOC enhancements. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:***					

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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
FY22 decreased by $0.030M based on contract requirements in support of upgraded PMS SKED being delivered.					
Title: Strategic Planning &Forecasting (SPF) Upgrade	1.333	1.423	1.445	0.000	1.445
Articles:	-	-	-	-	-
Description: SPF is part of a suite of tools in NMMES that are utilized to assist Navy industrial activities in resource planning and long term workload forecasting to meet CNO strategic maintenance requirements through the gathering and compiling of workforce data. Two additional applications; 1) Performance Measurement and Control (PMC) and Quality Performance System (QPS) are interfaced with SPF to produce the staffing, planning and performance measurement analysis necessary to successfully accomplish work in navy industrial activities. All three of these applications have known software deficiencies, which limit productivity and require cumbersome manual adjustments of key planning, availability progress, and workload leveling progress reports. This data is reported to the CNO on a weekly basis and is shared with others such as the Joint Chiefs and Congress when requested. Historically to effectively operate and meet mission needs, the naval shipyards and RMCs have supplemented this suite with additional local spreadsheet and databases, adding to the complexity of replacing this aging solution. One goal of the SPF Upgrade is to eliminate these ad hoc databases and unify the solution to effectively operate in the targeted navy data center environment. The SPF Upgrade is part of the Service Life Extension that will address the accumulation of significant problems with this application, update the software platform, provide integrated metrics capabilities across naval shipyards and include accessibility of data by planners at headquarters. The SPF Upgrade will modernize the database architecture to provide fully functioning data warehouse environment that will eliminate the weekend long running of PMC jobs that hinders efficiency and productivity. The Upgrade will eliminate the currently required manual interfaces with other NMMES applications to produce a seamless real-time environment that can accommodate all project management metrics, as well as all ship maintenance related metrics. Additionally, it will eliminate the manual data gathering and consolidation efforts required to produce Shipyard Interim Metrics; and eliminate the need for Headquarters and each shipyard to maintain their own unique respective standalone data files. These efforts are in direct support of the CNO's Design for Maritime Superiority line of effort for the role of data in decision-making.					
FY 2021 Plans: Finalize functional and business process analysis and market analysis of commercial products. Select commercial package(s) and begin configuration and integration planning. Complete configuration of upgrade,					

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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 begin testing in the consolidated environment once network circuit upgrades are complete for the SPF upgrade in preparation. ***FY 2022 Base Plans:*** Begin configuration and integration of the QPS and PMC components. Initiate testing of the end-to-end business processes in the toolset. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 increase by $0.022M supports of requirements identified for follow-on modules in support required capability.					
Title: Financial Technical Upgrade	2.320	2.860	1.570	0.000	1.570
Articles:	-	-	-	-	-
Description: NMMES has two primary applications that are financial feeders; 1) SYMIS Mission Funded COST (aka COST) which processes cost related data for mission funded activities with the Standard Accounting & Reporting System - Field Level (STARS-FL); and 2) the SYMIS Pre & Post Payroll Processes which manages the Time & Attendance data from NMMES to the Defense Civilian Payroll System (DCPS). These applications are targeted for modernization to address the FOUR mandatory requirements: 1) meeting FISCAM and auditability requirements; 2) transitioning COST to interface with SABRS, vice STARS-FL no later than 30 September 2019; 3) both these applications are COBOL-based. COST utilizes a 1990s era Case tool (PACBASE) to generate COBOL-ready code. In 2015, vendor support for the PACBASE tool was transitioned to an IBM subsidiary in France (who in 2016 informed the Navy that support for the tool would end by 2018), hence without this tool the COST application cannot be updated and therefore must be refreshed in order to operate; and 4) the rapid increase in the cost of gaining sufficient COBOL licenses to operate these two applications in support of fleet maintenance has also created emerging execution year budget challenges for the Navy to such an extent that it is now more feasible to transition these applications to a non-COBOL solution than to continue in the current licensing structure. The Financial Technical Upgrade addresses these four urgent needs in order to continue operation of the NMMES system in support of ship and submarine maintenance operations. ***FY 2021 Plans:*** As the STARS-FL to SABRS transition completes initiate pilots of COTS tools to identify and downselect to the preferred solution. Being G invoicing as directed by the Department of Treasury. Deployment of select modules					

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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
in the replatformed toolset. Conduct training and deployment. Begin planning and requirements identification for future potential Navy ERP interface. ***FY 2022 Base Plans:*** Deploy new NMMES financial solution to shipyards and RMC production environments and begin potential Navy ERP interface. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decreased by $1.290M based on contract estimates in support of the deployment of replatformed code base/COTS product.					
Title: Material Management Upgrade	2.172	1.893	1.217	0.000	1.217
Articles:	-	-	-	-	-
Description: The Material Access Technology-Mission Funded (MATmf) application is used by all Naval Shipyards to manage and provide logistical support for services and materials manufactured, purchased and utilized in the overhaul, repair, and maintenance of ships and submarines. MATmf provides quantitative, financial, and status information on industrial materials. It monitors the shop stores in the shipyard and assesses the direct material inventories. MATmf has reached end-of-life and is operating on software components that are considered obsolete. A Service Life Extension is required to support the future capabilities (i.e. eTWD requirements), to correct sustainability issues, and to improve the ability to support current and future ships maintenance. While the upcoming MSE releases will consolidate application databases (including MATmf into a data center environment); it does not include material integration across shipyards nor provide usable real time material information or metrics across the ship maintenance community. The MSE releases will also not convert the outdated development code, eliminate the time cumbersome manual batch processing, nor fix a host of long term shortcomings affecting the efficiency of MATmf (including long time printing limitations affecting Material Control Tags and waterfront performance). Utilizing the findings from multiple LEAN events NAVSEA 08 and the Corporate Material Process Action Team have identified and documented many areas in MATmf that need enhancement to improve effectiveness. Some of these requirements include: 1) the ability to allow for Fiscal Year rollover of JMLs, 2) the ability to allow redistribution of bulk receipt inspected materials to other shipyards, 3) the ability to report transactions for BP28 assets, 4) improve the ability to create efficient processes for receipt of RFI tagged material into Shop Stores, 5) improve receipt of shipyard contracts into shipyard for receipt inspection, 6) allow DLR material in Shop Stores, 7) address transition to another handheld scanner as					

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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
the current handhelds are no longer available for purchase. These deficiencies will be addressed in the Material Management Upgrade. ***FY 2021 Plans:*** Conduct prototype testing and analysis to determine the best solution to meet ship maintenance requirements. After down selection initiate software configuration efforts. Begin functional testing of the replacement solution. Conduct Integration testing to insure the planned solution meets performance requirements of NMMES System and external material management systems of record. This is dependent on the continued DISA network circuit procurement, installation, and cybersecurity protections that will continue into FY21 to support the Depot Maintenance user community. ***FY 2022 Base Plans:*** Begin acceptance testing, training and deployment. Continued deployment of SMMS. Additional development, integration, and user acceptance testing to SMMS to moving into government cloud environment, once approved by NAVSEA 08. Additional modules to incorporate functionality of more local material apps developed, acceptance tested by users, and FMA users trained, as necessary by corporate needs. Sustainment of current SMMS application. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decreased by $0.676M as configuration ramps down and deployment begins based on current contract estimates.					
Title: NMMES -- Maritime Systems Environment (MSE) -- Database Optimization	2.810	2.775	2.160	0.000	2.160
Articles:	-	-	-	-	-
Description: The NMMES system is presently undergoing modernization to address cyber security deficiencies, consolidate and align databases across multiple data instances, and to transition the solution into an approved Component Enterprise Data Center (CEDC). Once the transition from four geographically dispersed instances to the CEDC is complete and has reached stability MSE Database will be optimized to gain throughput efficiencies, capitalize on economies of scale, and rationalize data structures to streamline the use of authoritative data and to provide standardized access to data across the fleet maintenance enterprise. MSE is live at the RMCs, FDRMC, and SRF. NSYs and NSSF will transition to the MSE UNNPI environment in FY20-21.					

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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
FY 2021 Plans: In FY21 our plan is to continue analyzing legacy system data and component application database structures to discover opportunities for efficiency gains through the implementation of streamlined database designs which are key in supporting analytics and database decision making. ***FY 2022 Base Plans:*** In FY22 we plan to continue our efforts from the previous year by implementing MSE system wide data optimization and normalization to cohesively and seamlessly integrate multiple component databases using modern database schema designs and remove redundant application specific stored procedural codes embedded in databases. Goal is to eliminate duplication of stored data and unnecessary procedural programming code in databases to directly support mission critical data analytics and dramatically increase system efficiency and computational speed. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decreased by $0.615M due to the analysis and revised estimates by project teams to support program goals.					
Title: SUPDESK - Timekeeping For All ***Articles:*** ***Description:*** The current timekeeping system (SUPDESK) at the shipyards allows managers to input time for their employees. This is considered a financial compliance issue and requires the system be adjusted to allow all shipyard workers to input and certify their individual time. Will also add the capability to track and certify overtime approvals. Supports efforts to close a financial audit finding by enabling time attestation for all employees. ***FY 2021 Plans:*** Begin software development and integration with NMMES. Begin functional testing of the replacement solution. Conduct integration testing to insure end to end data flow meet compliance requirements. ***FY 2022 Base Plans:*** Continue integration; begin training and deployment with the activities. ***FY 2022 OCO Plans:***	0.550 -	1.450 -	1.450 -	0.000 -	1.450 -

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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
N/A					
Title: MSE Waterfront Process Improvement	0.570	0.250	0.765	0.000	0.765
Articles:	-	-	-	-	-
Description: The Maritime Systems Environment (MSE) Waterfront Processes Improvement project is focusing on aligning the NMMES toolset to compliment waterfront industrial processes changes that were recommended based on the outcomes of multiple LEAN events. This is a multi-year initiative to not only address the backlog of LEAN recommendations in the ship maintenance community, but to also provide the impetus to accelerate the implementation of additional process improvements to gain further economies in the maintenance community. ***FY 2021 Plans:*** Continue to review and conduct analysis on the LEAN findings and incorporate into enhancements on future releases in the consolidated baseline at CEDC Charleston. Increase customer engagement and continue process improvement initiatives. Align tools to include rationalization of functionality into a consolidated NMMES toolset. Finalize the process for the agile software development methodology, and deploy the solution for multiple projects. Complete installation of network improvements providing faster response of data for waterfront personnel in the ship maintenance community. ***FY 2022 Base Plans:*** Incorporate change requests for remaining items on LEAN backlog and updates into the existing systems. Conduct LEAN Rapid Improvement Event to capture new process improvement initiatives. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 increased by $0.515M as the process to integrate, test, and deploy become more agile in support of the waterfront execution efforts.					
Title: Enterprise Data Analytics	1.603	1.843	2.040	0.000	2.040
Articles:	-	-	-	-	-
Description: Establish capability to fully utilize navy authoritative maintenance data to develop predictive analysis and gain efficiencies in ship availabilities to provide data driven decisions based on current information. ***FY 2021 Plans:***					

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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
Continue integration, configuration, and deployments of selected toolset(s) as functionality is delivered based on lessons learned, user community feedback, leadership direction, and data quality improvements. ***FY 2022 Base Plans:*** Continue integrating data sets from depot and intermediate maintenance applications to improve data visualization and analysis across the maintenance enterprise. Conduct efforts to provide automatic retrieval of information from various corporate systems that are manually performed on a daily basis, thereby eliminating the manual and laborious burden, ensuring consistency of data retrieval, and maintaining the pedigree of data collection. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 increase by $0.197M supports improving data quality and configuration adjustments based as feedback is received from the functional users and leadership during the initial and follow-on deployment and demos.					
Title: Product Data Management Integration	2.387	0.835	0.750	0.000	0.750
Articles:	-	-	-	-	-
Description: Modify the NMMES solution to be able to utilize the 3-D Product model information being delivered to the Navy by the shipbuilders for the Ford and Columbia Classes. Both the Ford Class Carrier and Columbia Class Submarine Programs are being designed, built and delivered utilizing 3-D integrated product models. Configuration and technical information will be provided to the government in electronic format rather than via paper-based drawings. The current suite of Shore Maintenance applications cannot accept the data delivered by either program, which will impact the ability of the shore Maintenance Community to maintain and modernize these platforms. This is required to support the USS FORD Planned Incremental Availability (PIA) at Norfolk Naval Shipyard as well as future maintenance availabilities on both classes. ***FY 2021 Plans:*** Continue configuration, integration, and testing activities. Correct deficiencies identified during the testing processes. Initiate deployment in alignment with the rest of the NMMES modules as usable features become available. Expand deployment capability across the NAVSEA community from the initial localized deployment sites. ***FY 2022 Base Plans:***					

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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
Finalize data integration and manipulation standards, policies, and practices to support COLUMBIA Class, FORD Class, and VIRGINIA Block V. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decrease by $0.085M as data integration complete and stabilization and gap closure efforts are conducted.					
Title: Local Application Rationalization	0.598	1.030	0.660	0.000	0.660
Articles:	-	-	-	-	-
Description: Several local applications provide site-specific augmentation to the NMMES toolset due to the historically distributed environment. The project rationalizes application to provide standardized functionality across the shore maritime maintenance community in line with the centralized hosting. This requires reviewing local application functionality and to determine which application functionality should be migrated. ***FY 2021 Plans:*** Continue analysis of local applications for rationalization into MSE. Begin planning and design for the standardization, configuration/integration of specific functionality into the NMMES portfolio. Progress planning and design for the standardization, configuration/integration into NMMES portfolio. Configuration and integration to incorporate the required end-to-end functionality into the centrally hosted single instance of the NMMES system. ***FY 2022 Base Plans:*** Consolidate required functionality of selected local naval shipyard applications that extend functionality beyond the aging shipyard IT systems. Continue to enhance the MSE suite of applications and implement local application functionality as older government made software is re-platformed or replaced with commercial off-the-shelf (COTS) software. Improve product support with consolidated functionality in fewer software applications. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:***					

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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
FY 22 decrease by $0.370M due to support of Risk Management Framework cybersecurity assurances processes during the integration efforts.					
Title: Mobility Solutions	0.600	1.944	1.341	0.000	1.341
Articles:	-	-	-	-	-
Description: Establish a "go everywhere" capability for the NMMES system at the Regional Maintenance Centers and Naval Shipyards. Include the capability to retrieve authoritative information across multiple, secure devices, (i.e. tablets, digital readers, scanners, etc.) to continue to exploit a paperless arena. ***FY 2021 Plans:*** Expand to aircraft carriers, test requirements and develop processes to support remote support, primarily photo. Continue expanding application availability for mobile devices. ***FY 2022 Base Plans:*** Identify electronic controls required to secure information on mobile devices and define technical attributes to support the expansion to include wearable devices as well as expand to video and voice from inside ship hulls. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decrease by $0.603M due to expanding application availability for mobile devices.					
Accomplishments/Planned Programs Subtotals	19.671	22.408	16.579	0.000	16.579

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The backbone of the present solution is a set of dated information technology (IT) products that have exceeded or are approaching end-of-life and do not meet the increasingly digitized operating environment. In order to ensure that the IT toolset continued functioning as required the Fleet Maintenance Board of Directors approved the establishment of the NAVSEA PMO-IT to oversee the selected development and sustainment efforts of this solution; to acquire and manage the IT resources necessary to gain further efficiencies in the toolset; and to transition this solution to a more modern and efficient end state. Selected modernizations, utilizing Commercial Off The Shelf (COTS) are aligned with ongoing sustainment to provide an IT solution until a COTS based Technical Refresh of this solution can be completed and

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deployed. Existing IT contracts will be used for sustainment services along with Other Transaction Agreements (OTA) and existing delivery orders to support required services at the waterfront.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		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
Software Development	C/CPFF	NAVSEA : WNY, D.C.	202.896	19.671	Oct 2019	22.408	Nov 2020	16.579	Oct 2021	-		16.579	-	-	-
Software Development	WR	NSLC : Mechanicsburg, PA	15.999	0.000		0.000		0.000		-		0.000	-	-	-
Advance Planning Analysis	WR	NAVWAR : Arlington, VA	7.471	0.000		0.000		0.000		-		0.000	-	-	-
Advance Planning Analysis	C/CPFF	NAVSEA : WNY, D.C.	33.474	0.000		0.000		0.000		-		0.000	-	-	-
Advance Planning Analysis	C/CPFF	NSWC PHD : Port Hueneme, CA	5.000	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	264.840	19.671		22.408		16.579		-		16.579	-	-	N/A

Remarks

Program plans to execute all contract awards for software development of shipyard and national systems through the NAVSEA SEAPORT vehicle and other competitively awarded contracts.

	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	264.840	19.671		22.408		16.579		-		16.579	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

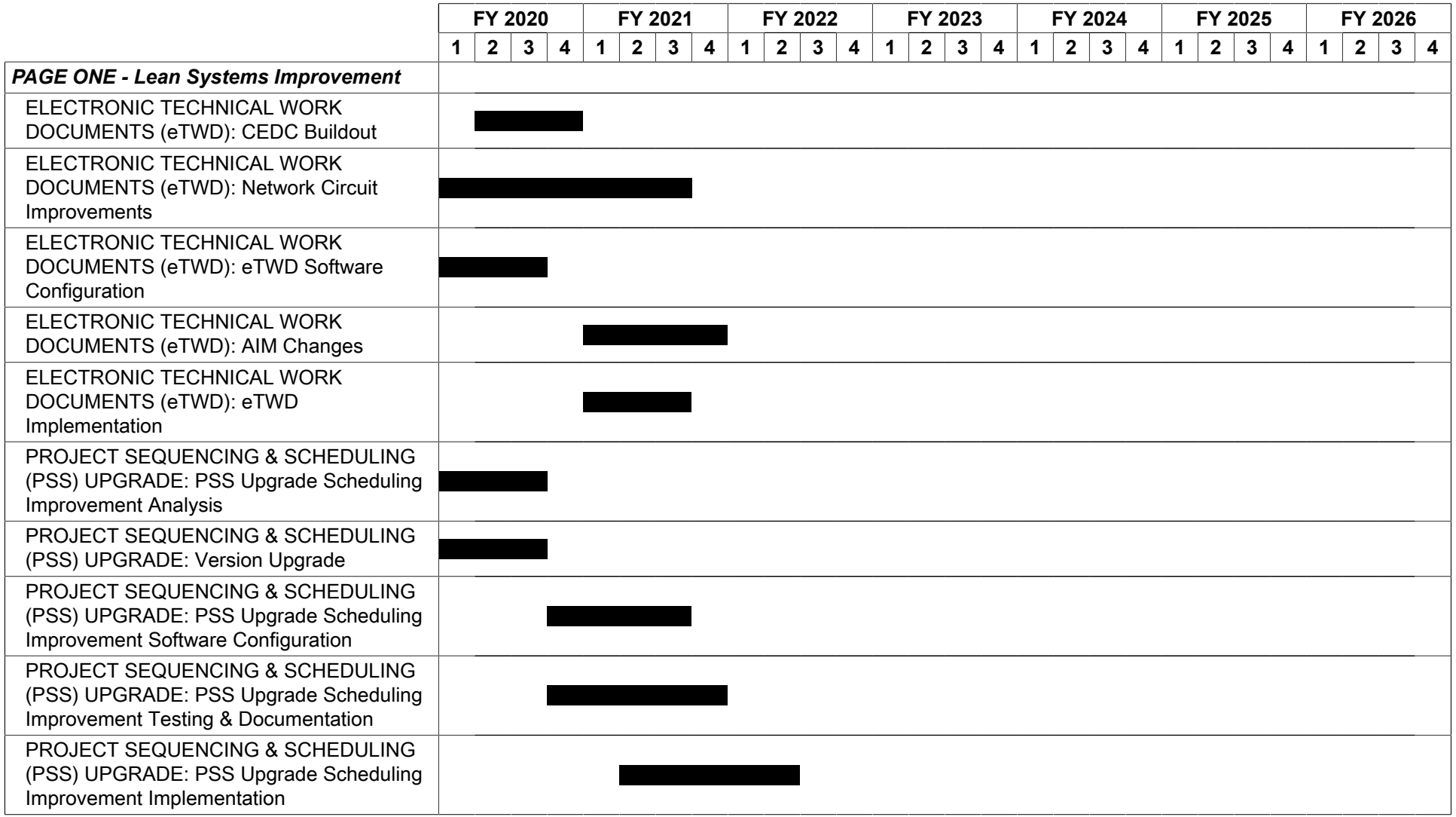

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

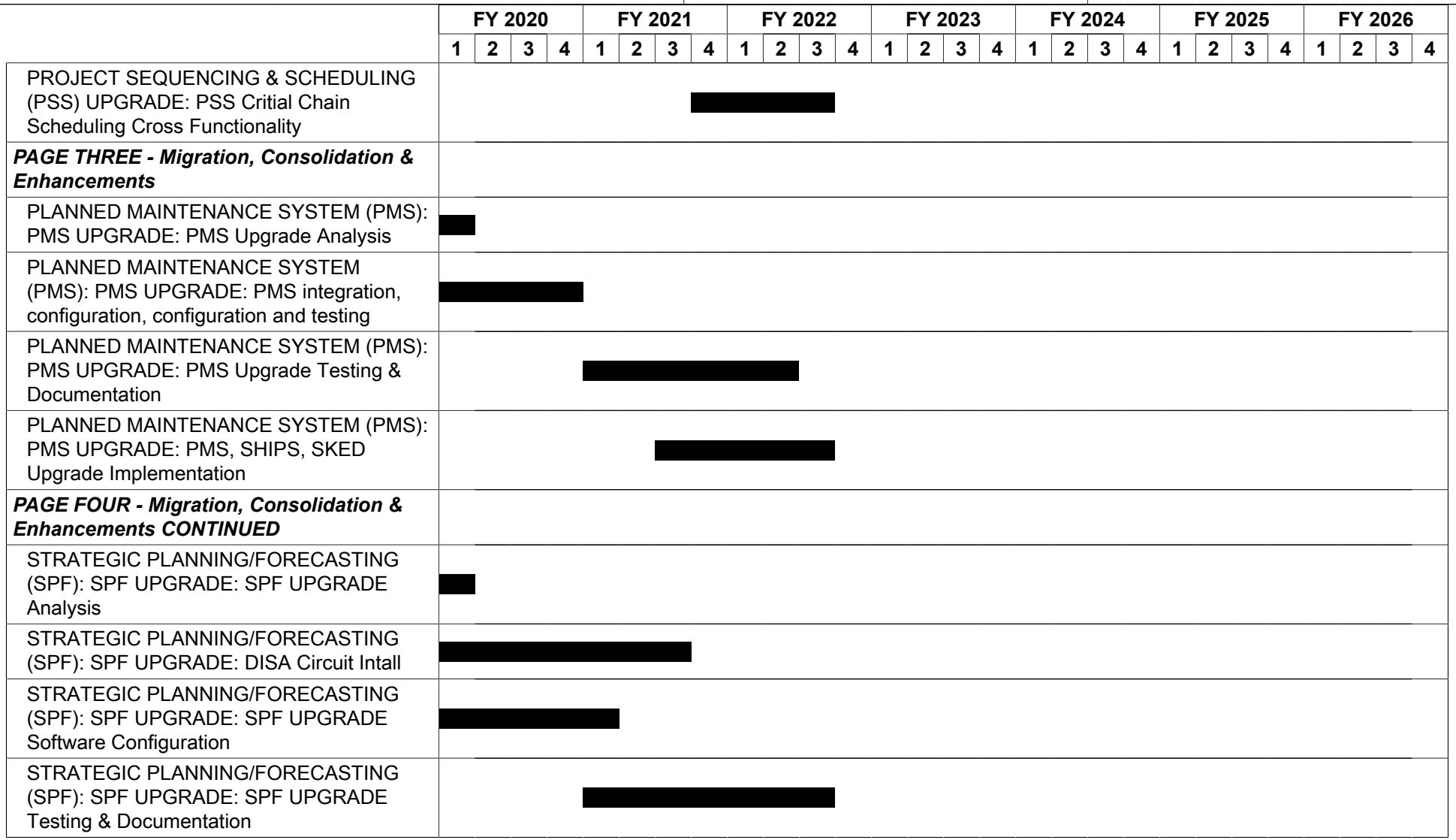

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

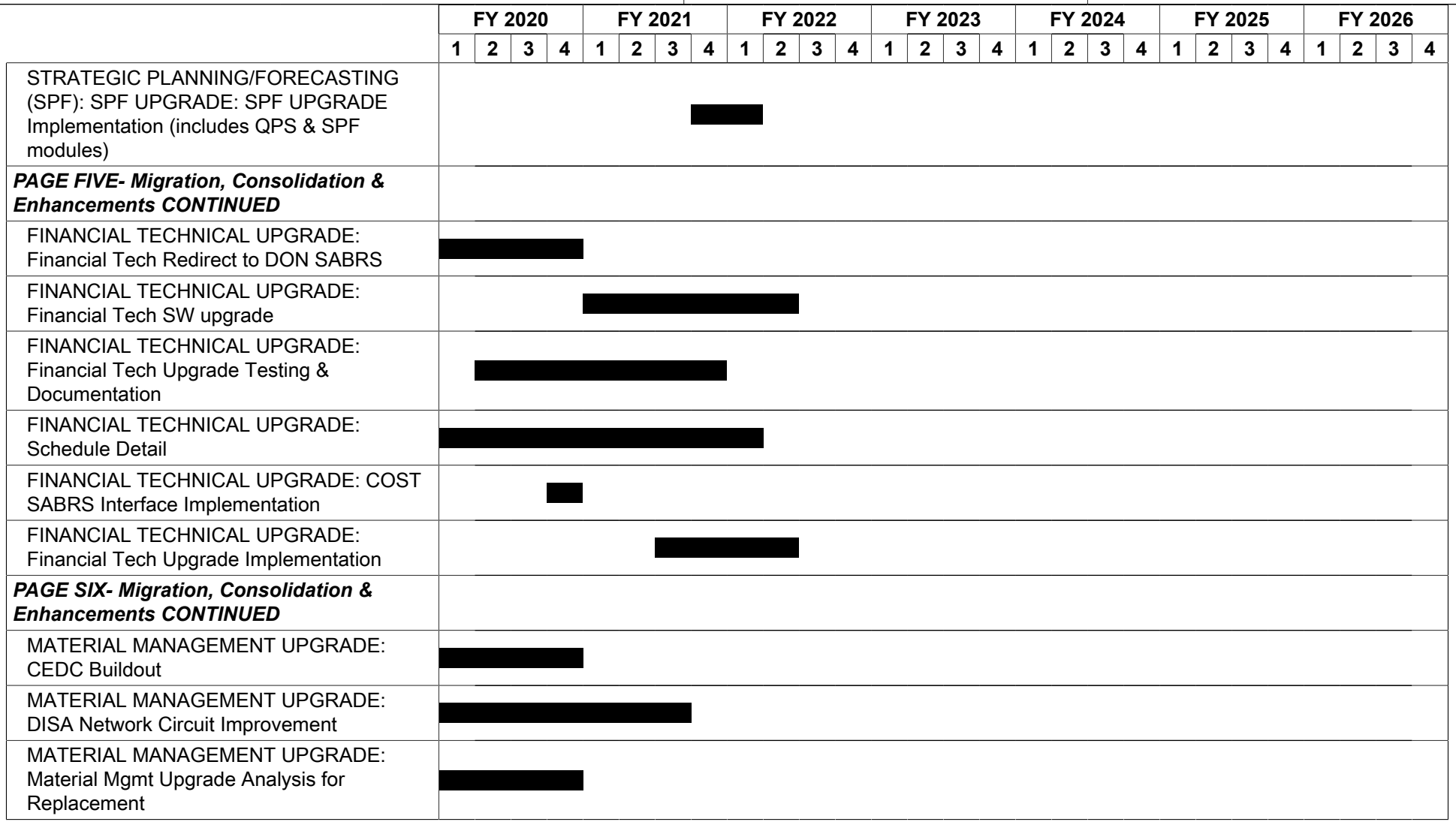

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

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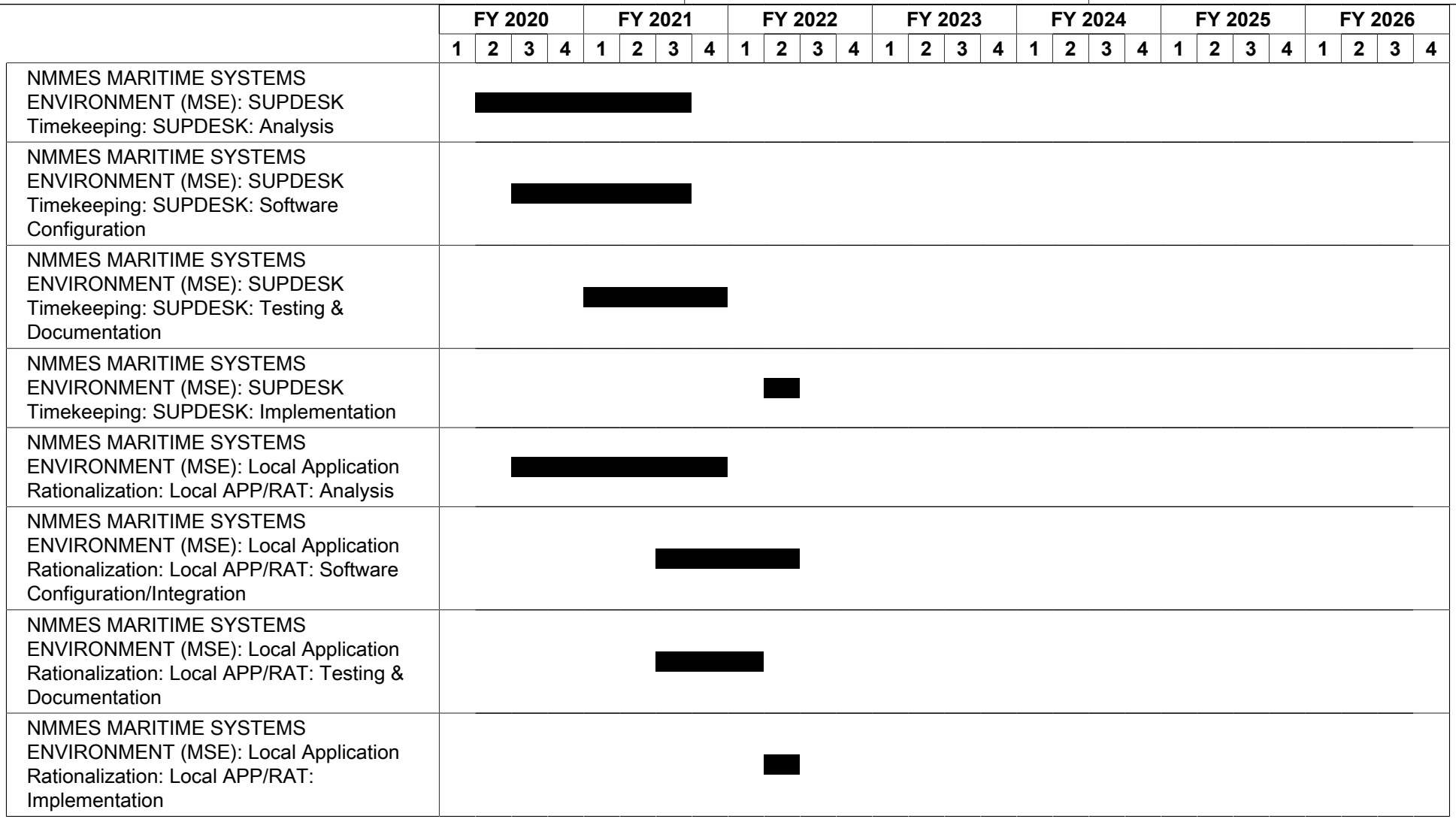

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

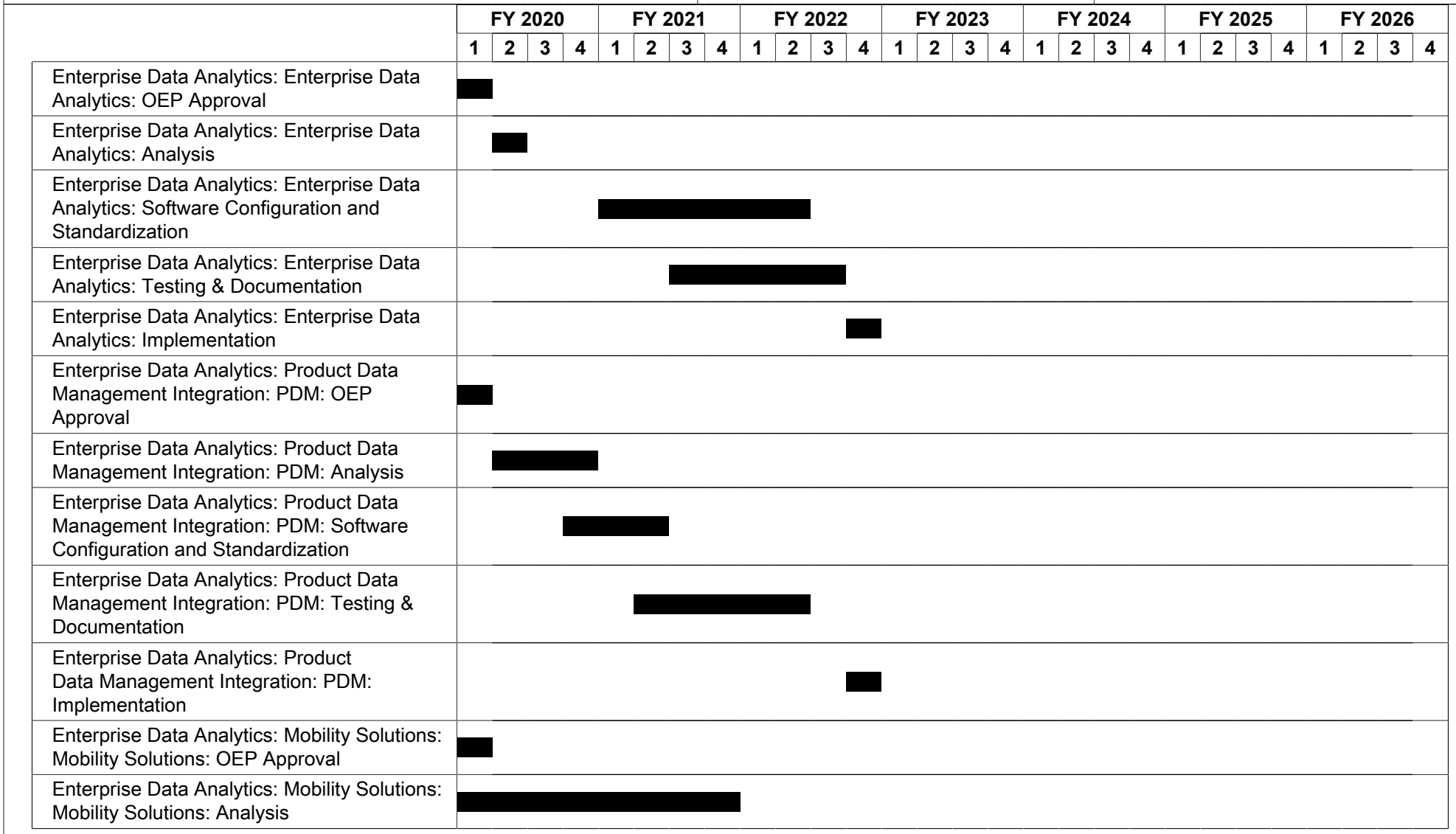

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

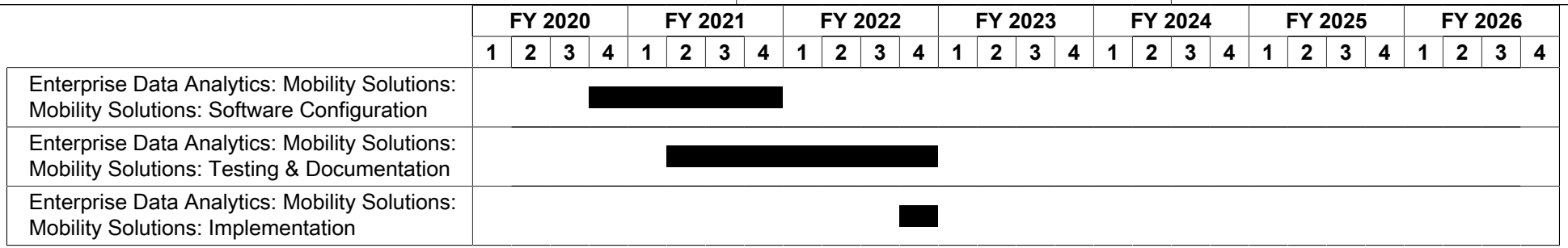

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
PAGE ONE - Lean Systems Improvement				
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): CEDC Buildout	2	2020	4	2020
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): Network Circuit Improvements	1	2020	3	2021
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): eTWD Software Configuration	1	2020	3	2020
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): AIM Changes	1	2021	4	2021
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): eTWD Implementation	1	2021	3	2021
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: PSS Upgrade Scheduling Improvement Analysis	1	2020	3	2020
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: Version Upgrade	1	2020	3	2020
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: PSS Upgrade Scheduling Improvement Software Configuration	4	2020	3	2021
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: PSS Upgrade Scheduling Improvement Testing & Documentation	4	2020	4	2021
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: PSS Upgrade Scheduling Improvement Implementation	2	2021	2	2022
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: PSS Critial Chain Scheduling Cross Functionality	4	2021	3	2022
PAGE THREE - Migration, Consolidation & Enhancements				
PLANNED MAINTENANCE SYSTEM (PMS): PMS UPGRADE: PMS Upgrade Analysis	1	2020	1	2020
PLANNED MAINTENANCE SYSTEM (PMS): PMS UPGRADE: PMS integration, configuration, configuration and testing	1	2020	4	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
PLANNED MAINTENANCE SYSTEM (PMS): PMS UPGRADE: PMS Upgrade Testing & Documentation	1	2021	2	2022
PLANNED MAINTENANCE SYSTEM (PMS): PMS UPGRADE: PMS, SHIPS, SKED Upgrade Implementation	3	2021	3	2022
PAGE FOUR - Migration, Consolidation & Enhancements CONTINUED				
STRATEGIC PLANNING/FORECASTING (SPF): SPF UPGRADE: SPF UPGRADE Analysis	1	2020	1	2020
STRATEGIC PLANNING/FORECASTING (SPF): SPF UPGRADE: DISA Circuit Intall	1	2020	3	2021
STRATEGIC PLANNING/FORECASTING (SPF): SPF UPGRADE: SPF UPGRADE Software Configuration	1	2020	1	2021
STRATEGIC PLANNING/FORECASTING (SPF): SPF UPGRADE: SPF UPGRADE Testing & Documentation	1	2021	3	2022
STRATEGIC PLANNING/FORECASTING (SPF): SPF UPGRADE: SPF UPGRADE Implementation (includes QPS & SPF modules)	4	2021	1	2022
PAGE FIVE- Migration, Consolidation & Enhancements CONTINUED				
FINANCIAL TECHNICAL UPGRADE: Financial Tech Redirect to DON SABRS	1	2020	4	2020
FINANCIAL TECHNICAL UPGRADE: Financial Tech SW upgrade	1	2021	2	2022
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade Testing & Documentation	2	2020	4	2021
FINANCIAL TECHNICAL UPGRADE: Schedule Detail	1	2020	1	2022
FINANCIAL TECHNICAL UPGRADE: COST SABRS Interface Implementation	4	2020	4	2020
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade Implementation	3	2021	2	2022
PAGE SIX- Migration, Consolidation & Enhancements CONTINUED				
MATERIAL MANAGEMENT UPGRADE: CEDC Buildout	1	2020	4	2020
MATERIAL MANAGEMENT UPGRADE: DISA Network Circuit Improvement	1	2020	3	2021
MATERIAL MANAGEMENT UPGRADE: Material Mgmt Upgrade Analysis for Replacement	1	2020	4	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MATERIAL MANAGEMENT UPGRADE: Material Mgmt Upgrade Software Configuration	4	2020	4	2021
MATERIAL MANAGEMENT UPGRADE: Material Mgmt Upgrade Testing & Documentation	2	2021	4	2022
MATERIAL MANAGEMENT UPGRADE: Material Mgmt Upgrade Implementation	2	2022	3	2022
PAGE SEVEN- Migration, Consolidation & Enhancements CONTINUED				
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Database Optimization: OEP Approval	1	2020	1	2020
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Database Optimization: Analysis	1	2020	1	2021
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): DISA Circuit Upgrade	1	2020	3	2021
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Database Optimization: Software Configuration and Standardization	4	2020	4	2022
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Database Optimization: Testing & Documentation	3	2020	4	2022
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Database Optimization: Implementation	4	2021	4	2021
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): SUPDESK Timekeeping: SUPDESK: Analysis	2	2020	3	2021
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): SUPDESK Timekeeping: SUPDESK: Software Configuration	3	2020	3	2021
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): SUPDESK Timekeeping: SUPDESK: Testing & Documentation	1	2021	4	2021
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): SUPDESK Timekeeping: SUPDESK: Implementation	2	2022	2	2022
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Local Application Rationalization: Local APP/RAT: Analysis	3	2020	4	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Local Application Rationalization: Local APP/RAT: Software Configuration/Integration	3	2021	2	2022
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Local Application Rationalization: Local APP/RAT: Testing & Documentation	3	2021	1	2022
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Local Application Rationalization: Local APP/RAT: Implementation	2	2022	2	2022
Enterprise Data Analytics: Enterprise Data Analytics: OEP Approval	1	2020	1	2020
Enterprise Data Analytics: Enterprise Data Analytics: Analysis	2	2020	2	2020
Enterprise Data Analytics: Enterprise Data Analytics: Software Configuration and Standardization	1	2021	2	2022
Enterprise Data Analytics: Enterprise Data Analytics: Testing & Documentation	3	2021	3	2022
Enterprise Data Analytics: Enterprise Data Analytics: Implementation	4	2022	4	2022
Enterprise Data Analytics: Product Data Management Integration: PDM: OEP Approval	1	2020	1	2020
Enterprise Data Analytics: Product Data Management Integration: PDM: Analysis	2	2020	4	2020
Enterprise Data Analytics: Product Data Management Integration: PDM: Software Configuration and Standardization	4	2020	2	2021
Enterprise Data Analytics: Product Data Management Integration: PDM: Testing & Documentation	2	2021	2	2022
Enterprise Data Analytics: Product Data Management Integration: PDM: Implementation	4	2022	4	2022
Enterprise Data Analytics: Mobility Solutions: Mobility Solutions: OEP Approval	1	2020	1	2020
Enterprise Data Analytics: Mobility Solutions: Mobility Solutions: Analysis	1	2020	4	2021
Enterprise Data Analytics: Mobility Solutions: Mobility Solutions: Software Configuration	4	2020	4	2021
Enterprise Data Analytics: Mobility Solutions: Mobility Solutions: Testing & Documentation	2	2021	4	2022
Enterprise Data Analytics: Mobility Solutions: Mobility Solutions: Implementation	4	2022	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy									Date: May 2021			
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				Project (Number/Name) 2905 / *BUPERS IT*			
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**
2905: *BUPERS IT*	169.232	102.007	137.429	140.520	-	140.520	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

MyNavy Human Resources (HR) Transformation - formerly known as Manpower, Personnel, Training & Education (MPT&E) Transformation -- will change how HR services are provided throughout a Sailor's entire "Hire-to-Retire" lifecycle and improve fleet combat readiness. By streamlining processes and systems, MyNavy HR will improve the speed, accuracy, and quality of personnel and pay services, better positioning the Navy to equip and manage its people.

This effort is the linchpin of the Navy's MPT&E Business IT Transformation strategy that stems from the decision to invest in programs that directly align with the Sailor 2025 vision. The current 70-year-old business processes and 40-year-old obsolete IT systems will not sustain Fleet anticipated growth and is neither cost efficient nor effective. MyNavy HR involves revolutionary change by using agile delivery model to the greatest extent possible to implement business IT products using the Industry Best Practices Model (e.g., early investment for largest ROI, rapid prototyping, and vanilla COTS products usage.) MyNavy HR is a fully integrated portfolio of IT Systems organized into five distinct pillars: Navy Personnel and Pay (NP2), Learning Stack (LS), Enterprise Customer Relationship Management (eCRM), Single Point of Entry (SPOE), and Authoritative Data Environment (ADE). This portfolio of systems serves as the cornerstone of the OPNAV N1 MyNavy HR strategy.

The impetus for building an adaptive family of systems is gearing MyNavy HR Transformation towards customer needs. The traditional waterfall delivery methodology of IT goods and services cannot meet the emergent requirements evolving from shortened technical obsolescence. Thus, MyNavy HR Transformation will employ an Agile delivery method that is highly structured, with a repeatable software development approach designed to quickly deliver usable capability to the end user. These capabilities are packaged as Minimum Viable Products (MVPs) which are routinely delivered to the customer for their use and evaluation. Favorably received MVPs are subsequently refined and integrated into a production baseline.

Rapidly integrating a family of systems using an agile methodology necessitates an overarching system integrator and coordinator to ingest pilots and prototypes into a technical baseline. The Transformation Portfolio Coordinator & Production (TPC&P) contract is an IDIQ contract that will deliver a family of systems in support of MyNavy HR. This contract will provide the Global Design & Strategic Planning to baseline the "55 to 1" technical execution plan and will articulate the "system of systems" baseline release. Additionally, pilots and prototypes that have reached sufficient maturity will be integrated and deployed into the production baseline under this contract.

AUTHORITATIVE DATA ENVIRONMENT (ADE)
The Authoritative Data Environment (ADE) is an enterprise information management system that will migrate the existing legacy data warehouses into a central data repository that is composed of a data warehouse, data lake, data management tools and an Application Program Interface (API) Layer.
ADE will provide an authoritative data-sharing framework, leveraging scalable and interoperable technologies as well as business intelligence and data analytic capabilities.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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ADE will need to interface and integrate with SPOE and all MyNavy HR transactional and business systems, including enabling 'plug & play' of new services, technologies, and system capabilities. Some of the key principles of ADE include:
1. Flexible architecture and scalable design.
2. Data Governance to produce authoritative, cleansed, conformed, consolidated, and calculated data.
3. Data Access to specified users.
4. Master Data Management (core elements, metadata tagging, business rules, standards, metrics, and tools).
5. Data analytics and business intelligence (descriptive, prescriptive, and predictive).
6. Identification, development, and maintenance of enterprise data policies.

ENTERPRISE CUSTOMER RELATIONSHIP MANAGEMENT (eCRM)
The eCRM solution will integrate business processes, supporting systems, and authoritative data in support of Navy Personnel Command's (NPC's) MNCC (My Navy Career Center), Navy Recruiting Command (NRC), Navy Education & Training Command (NETC), and other commands that manage the Navy workforce.
The eCRM solution provides an approach to manage information on current and future Sailors, veterans, and their families. The eCRM solution is organized by the following segments:
1. Sales Management - recording all stages of the prospecting process to include contact management, leads tracking, forecasting and initial processing.
2. Knowledge Management - providing the tools for identifying, capturing, evaluating, retrieving, and sharing information assets.
3. Case Management - supporting the automation of processes to formulate opinions, approvals, and fulfillment of case related requests.
4. Performance Management- supporting the performance of Navy Sailors.
5. Recruiting - eCRM capabilities provide several functions in support of the Navy's recruiting needs, to include:
A. Provide personally identifiable information (PII) in a commercial cloud platform.
B. Provide ability for users to access mobile platforms.
C. Meet Navy Cybersecurity requirements to protect Impact Level (IL) 4 data and will achieve an Authority to Operate (ATO) from the Navy Authorizing Official (NAO).
D. Support non-recruiting activities and address case management and knowledge management. Case management functionality supports tracking incidents, and knowledge management provides for sharing and collaborating across various business areas.

LEARNING STACK (LS)
The Learning Stack will provide a cloud-based material solution that will streamline learning management (course/content delivery and assessments), capture and record interactive learning experiences, enable curriculum authoring and development, provide student Sailor registration and administration, create and regulate course/student scheduling, and offer e-learning capabilities, such as distance learning.

The Learning Stack is a delivery vehicle for the following core objectives of the Ready Relevant Learning (RRL) initiative:

Learning Management System (LMS) with Assessments
Learning Record Store (LRS)
Curriculum Development System (CDS)

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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Student Information System (SIS)
Enterprise Resource Scheduler (ERS)
Collaborative Learning Environment (CLE)

The Learning Stack is one of three lines of effort that is the Navy's strategy for it learning continuum. The other two are RRL content modernization, and the Training Network infrastructure. Collectively, these three individual efforts will cultivate instruction content that meets Fleet validated needs (ashore and afloat), and provide keystone delivery mechanisms that will decrease training timelines, assimilate operational agility, and improve overall mission readiness.

Additionally, the Learning Stack supports the MyNavy HR Transformation Program that includes yet expands beyond the RRL core initiatives identified above. In support of the broader MyNavy HR enterprise, the Learning Stack will provide a centralized, authoritative repository for Interactive Multimedia Instruction (IMI) courseware, officer and citizen development (NJROTC and ROTC candidate management), enlisted advancement exam development and distribution, enlisted degree completions, and tuition assistance authorizations.

The RRL and MyNavy HR Transformation initiatives require the development of Learning Stack capabilities that permit:

1. Mobile & flexible delivery of modular training to the Sailor
2. Synchronization of work requirements with learning modules to ensure proper training delivery
3. Leveraging cloud-hosted capabilities to optimize the Learning Stack delivery model

NAVY PERSONNEL AND PAY (NP2)
A 2015 analysis of alternatives for integration of personnel and pay capabilities recommended the use of Oracle PeopleSoft 9.2 with Global Payroll for achieving the Navy's Personnel and Pay IT needs. Follow-on analysis conducted as part of the MyNavy HR Transformation efforts in 2016 and 2017 indicated that the most cost effective approach to achieving the Transformation goals of modernizing HR Business System IT consistent with industry best practices was de-customization of the Navy Standard Integrated Personnel System (NSIPS) which uses Oracle PeopleSoft as its core technology, integration with Global Payroll, use of General Ledger to maximize auditability and accounting functions and hosting of the integrated solution. Navy Personnel and Pay (NP2) will sustain and develop the core system of systems architecture; executing pilot programs and iterative development of capabilities for Navy's MyNavy HR Transformation.
The NP2 adapts and reengineers business processes to conform to the technical parameters of PeopleSoft 9.2 while integrating with the Direct to Treasury Pay Capability via Pay Modernization (Pay Mod). This combined effort will result in a vanilla Commercial Off the Shelf, cloud hosted, integrated personnel and pay solution that will provide the Navy with an IT system that is modern, highly automated, auditable, and more efficient.
Implementation of NP2 will result in several key benefits:
1. Improved accuracy and auditability of personnel and pay transactions.
2. Treasury Direct Disbursing eliminating Navy reliance on the Defense Joint Military Pay System.
3. Improved permeability of Active and Reserve Components to improve accuracy and eliminate delays in pay processing when a member moves between components.
4. Increased automation of common personnel and pay transactions

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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5. Integration of functionality currently spread across 55 different adhoc and outdated HR Business Systems.

SINGLE POINT OF ENTRY (SPOE)
SPOE is an information management concept that provides an intuitive self-service capability for Sailors to view and manage personnel and career information, providing Sailors with access to information including learning content, HR applications, and career business processes. SPOE will be the user-facing capability, enabling the MyNavy Career Center (MNCC), linking Sailors to modernized personnel and pay capabilities in NP2, providing Sailor training through the LS, and access to authoritative data, which holds their personnel and pay record information. SPOE consolidates Navy's Human HR portals, knowledge, and applications into a single, simplified user experience and will include processes and functionality, such as:
1. Integration of capabilities, to include: My Navy Portal (MNP), Mobile Applications, CRM solution, and Credential Access Management (ICAM);
2. MNP
A. Serve as the My NavyHR's single point of entry to Sailors HR resources
B. Provide capability to have a low bandwidth version accessible to Sailors operating in a restricted bandwidth environment
C. Provide CAC-free access for Sailors accessing MNP via personal devices such as smart phones, tablets, personal laptops and computers.
3. ICAM
A. Provide authentication and single sign on capability for access to the objective My Navy HR capability
4. Mobility Program
A. Ability to host and manage mobile applications through the Navy App Locker
B. Provide Mobile application management suite/platform
C. Develop new MNP mobile application - native app for Sailors to access personal data and career life events

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Learning Stack (LS)	4.851	11.000	15.047	0.000	15.047
Articles:	-	-	-	-	-
FY 2021 Plans: Learning Stack (LS) will deliver on-demand training and education content to Navy personnel afloat and ashore. LS provides course completion and course catalog information located in a centralized repository. The LS capabilities will be integrated with MyNavy HR transformation initiatives, which will enhance the quality assurance of training and education content made available to the end user(s). 1. Learning Management System (LMS) (Impact Level 2 (IL2)/ Impact Level 4 (IL4) content migration and pilot LMS Secret Internet Protocol Router (SIPR) RRL content; 2. Pilot the Learning Record Store (LRS) in Impact Level (IL) IL4 environment with dashboards for training analytics integrations with LMS components; 3. Complete first phase of Curriculum Development System (CDS) implementation to expand curriculum development capability;					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
4. Develop Campus Solutions Student Information System (SIS) Pilots and licensing purchases; 5. Proof-of-concept with Enterprise Resource Schedule (ERS) COTS solution to enable an integrated enterprise view of people, resources, and locations; 6. Pilot Collaborative Learning tools for integration with LMS IL2/IL4. 7. Assess Learning Stack Afloat disconnected operations solutions along with completion data reporting to Learning Record Stores (LRS); 8. Complete CD implementation Phase II 9. Shutdown legacy Systems (AIM)					
FY 2022 Base Plans: LEARNING STACK (LS) 1. Complete LMS content migration to IL4 environment; 2. Complete LRS xAPI integration with LMS components; 3. Curriculum Development System (CDS) MVP to Production Integration within Salesforce IL4 environment (based on Pilot conducted in FY21) and Pilot CDS within SIPR/IL6 environment; 4. Complete Student Information System (SIS) PeopleSoft (Campus Solutions) integration MVP (Development and Test/QA IL4 Environments). 5. Begin development of Enterprise Resource Scheduler (ERS) in IL4 environment. 6. Pilot Afloat Disconnected Operations capability (based on assessment conducted in FY21). 7. Pilot Learning Object Repository (LOR) in IL4 environment to determine the path for establishing an authoritative repository; 8. Pilot on-demand Enlisted advancement exams capability, which will pivot traditional pencil and paper Enlisted advancement exams to an online environment; 9. Pilot Reserve Officer Training Corps (ROTC) and Naval Junior Officer Reserve Training Corps (NJROTC) capabilities in a cloud-based solution. Build candidate management capabilities, which can feed into other systems and help, realize efficiencies; 10. Integrate Navy College Management Information System with Learning Stack, which will be the authoritative source for Enlisted degree completion information and tuition assistance authorizations.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
FY22 Learning Stack funding profile increase by $4.047M is due to integrating the products resulting from the pilot efforts conducted in FY21 (i.e. LMS content migration; LRS xAPI integration; SIS Peoplesoft integration; etc). Additionally, to support the multiple piloting efforts initiated in FY22 to support the MyNavy HR enterprise transition model (i.e., legacy systems shutdown in FY23.).					
Title: Single Point of Entry (SPOE)	20.251	17.700	18.300	0.000	18.300
Articles:	-	-	-	-	-
FY 2021 Plans: FY21 will see several Single Point of Entry (SPOE) pilot efforts shift from completion to ingestion in the technical baseline. 1. Deploy / update 8 mobile applications (Financial Literacy, Physical Fitness Assessment (PFA) Update, Pregnancy & Parent, MyNavy Family, Records Mgmt, Center for Security Forces (CENSECFOR), Life skills Reachback, Navy Cool Program) as a key component of OPNAV N1s Sailor Self Service capabilities. This will include the need for additional software that provides high levels of encryption, in addition to device operating system protections and verifications. 2. Transition Identity, Credential, and Access Management (ICAM) (formerly IdAM) pilot to production baseline and complete integration with My Navy HR programs requiring ICAM in FY21. Effort improves Fleet authorization and security procedures. Software will require modest reconfiguration to meet Navy security parameters. 3. Advance integration of portal Career Life Event (CLE) portlet capabilities for Sailors to manage their careers in an intuitive self-service web environment. 4. Perform system consolidations in order to streamline MyNavy HR applications and capabilities. System integrations require new MyNavy Portal (MNP) development/modernization code builds to enable MNP to successfully partner with them. 5. Deploy MNP Quarterly releases to enhance capabilities for Sailor Self-Service, Personnel and Pay Data, and Career Life Event (CLE) pages					
FY 2022 Base Plans: 1. Continuing development and integration of portal Career Life Event (CLE) portlet capabilities for Sailors to manage their careers in an intuitive self-service web environment. 2. Perform system consolidations in order to streamline MyNavy HR applications and capabilities. System integrations require new MNP development/modernization code builds to enable MNP to collaborate with them.					

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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
3. Deploy MNP Quarterly releases to enhance capabilities for Sailor Self-Service, Personnel and Pay Data, public and private portals, and CLE pages. 4. Continue integration efforts for My Navy HR programs requiring ICAM user authentication. Effort improves Fleet authentication and security procedures. Software will require reconfiguration to meet Navy security parameters. FY22 ICAM includes completion of Learning Stack integration. 5. Deploy new updates, functionality and/or capability to 14 mobile applications, which serve as key components of OPNAV N1's Sailor self-service capabilities via mobile delivery; 6. Develop approximately two new mobile applications. Expansion and growth of the My Navy Portal native app will continue to add capabilities as identified by OPNAV N1 for MyHR Sailor capabilities in support of transactional capabilities. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 increase of $0.600M is due to expansion of the MyNavy Portal native app which supports transactional capabilities.					
Title: Enterprise Customer Relationship Management (eCRM) ***Articles:*** ***FY 2021 Plans:*** FY21 will focus on completing all Enterprise Customer Relationship Management (eCRM) deliverables. Planned tasks and accomplishments in FY21 include (SalesForce Licenses (Software as a Service) account for $12.0M of FY21 costs): 1. Integrate and migrate MVP 3 Transaction Online Processing System (TOPS) capability from MyNavy Career Center (MNCC) into the eCRM platform to provide a reliable document transfer system; 2. Integrate and migrate MVP 4 Credential, Apprenticeship and Voluntary Education (CAVE-VOLED) capability from MNCC into the eCRM platform in order to provide an integrated credentialing, apprenticeship and voluntary education suite of HR functions 3. Integrate and migrate MVP 5 N-17-H-EO (21st Century Sailor Office OPNAV N17 Harassment and Equal Opportunity) capability from MNCC into the eCRM platform to allow for fast, easy and secure submission of Harassment and EO complaints 4. Implement ARM MVP Salesforce Mobile App and texting into the eCRM platform in order to enhance communication between recruiters and leads.	27.367 -	29.487 -	28.500 -	0.000 -	28.500 -

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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
5. Migrate Physical Readiness Information Management System (PRIMS) into the eCRM platform to enhance the tracking of physical readiness in the Navy. 6. Procure Software-as-a-Service (SaaS) Licenses to provide high level capabilities to manage and track current Sailors and future Navy Recruits ***FY 2022 Base Plans:*** Enterprise CUSTOMER RELATIONSHIP MANAGEMENT (eCRM) 1. Migrate into ARM MVP (National Advertising Leads Tracking System (NALTS)) to integrate the Navy's marketing and advertising mission into the eCRM platform. 2. Implement RESFOR Reserve Relationship Management (R2M) into the eCRM platform in support of Navy Reserve Navy Operational Support Center (NOSC) process automation. 3. Deploy Inventory Professional Online (IPOL) to enhance recruiters ability to controls their inventory 4. Procure Software-as-a-Service (SaaS) Licenses to provide high-level capabilities to manage and track current Sailors and future Navy Recruits. 5. Deploy WebSTEAM (Web Standardized Territory Evaluation and Analysis for Management System) enabling recruiters access to the Navy's Primary market research tool for decision making on personnel 6. Deploy PRIDE Mod (Personalized Recruiting for Immediate Delayed Enlistment Modernization) and CSORT (Computerized Special Operations Resiliency Test) to enhance the recruiters tools to process new recruits into the Navy and assigning them to Navy positions. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decrease of $0.987M attributed to reduced requirements of integration services.					
Title: Navy Personnel and Pay (NP2)	30.008	56.092	55.173	0.000	55.173
Articles:	-	-	-	-	-
FY 2021 Plans: Efforts in FY21 are focused on achieving the Initial Operating Capability (IOC) for Navy Personnel and Pay (NP2) and stand-up the Navy payroll operations and customer support for all pay and personnel transactions. The achievement of IOC provides the Navy with the capability to pay Sailors using TDD for Active and Reserve Components (and discontinuing the use of Defense Finance Accounting System (DFAS) System (Defense Joint Military System (DJMS)): 1. Conduct design and development sprints for NP2 IOC;					

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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
2. Conduct Defense Joint Military System (DJMS) data cleansing and Personnel data transfer into NP2; 3. Conduct integration sprints for the NP2 IOC products; 4. Perform Iterative Development Test (DT) and Iterative System Integration Test (SIT) for NP2 IOC products; 5. Support the standup of Payroll Operations center. 6. Conduct the Government planned Systems Engineering Technical Reviews (SETR) for initial NP2 Release 7. Perform capability drops for NP2 IOC to complete functionality configurations and fixes from development tests; 8. Establish NP2 Functional Personnel & Pay Data Tiger Team to conduct data conversion activities. 9. Complete pay validation efforts to compare pay between NP2 and DJMS. 10. Develop training for NP2 to support Operational Testing. 11. Conduct Operational Assessment for initial NP2 Release. 12. Begin End-to-End Testing for Initial NP2 Release. 13. Acquire and support Joint Interoperability Test Command (JITC) services for audit efforts					
FY 2022 Base Plans: Efforts in FY22 are concentrated on achieving the Initial Operating Capability (IOC) for NP2, which provides the Navy with the capability to pay Sailors using TDD for Active and Reserve Components (and discontinuing the use of DFAS System (DJMS)). System requirements will be addressed for the remaining Personnel capabilities in support of the Navy's MyNavy HR IT Transformation initiative, to include 'Personnel Management;' 'Organizational Management;' and 'Distribution' Lines of Business. 1. Complete the development of NP2 IOC Training materials. 2. Complete NP2 payroll validation activities. 3. Complete Joint Interoperability Certification and SFIS Assessment. 4. Complete End-to-End Testing for Initial NP2 Release. 5. Complete Operational Testing for Initial NP2 Release. 6. Finalize deployment planning for Initial NP2 Release. 7. Complete capability drops for NP2 IOC (Hire to Retire functionality). 8. Begin planning activities for remaining NP2 Personnel pilots supporting the capabilities under the 'Personnel Management;' 'Organizational Management;' and 'Distribution' Lines of Business. 9. Begin design, development, and integration sprints for remaining NP2 personnel pilots supporting the capabilities under the 'Personnel Management;' 'Organizational Management;' and 'Distribution' Lines of Business. 10. Integrate old and new business processes, functionalities, and capabilities for Personnel products.					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
11. Build and deploy capabilities from legacy IT system applications into NP2 for remaining NP2 Personnel products (Personnel Management; Organizational Management; and Distribution) in the form of NP2 Quarterly Releases. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decrease of $0.919M associated with reduced efforts to deliver NP2 IOC.					
Title: Authoritative Data Environment (ADE)	13.100	23.150	23.500	0.000	23.500
Articles:	-	-	-	-	-
FY 2021 Plans: Efforts in FY21 will be focused on establishing the Authoritative Data Environment (ADE) in a commercial cloud environment and to allow for an enterprise implementation across all MyNavy HR systems and applications. 1. Piloting of emerging commercial cloud offerings 2. Consolidation of two MyNavy HR data warehouses 3. Application Program Interface (API) Gateway enterprise implementation 4. Integrate Machine Learning Tools into the ADE Environment enabling predictive (trending) and prescriptive (modeling) analytics 5. Deploy the Billet Based Distribution (BBD) capability into the ADE (Gov-Cloud) environment 6. Initiate the Fleet Training Management and Planning System (FLTMPS) capability into the ADE environment 7. Develop a prescriptive (modeling) dashboard environment ***FY 2022 Base Plans:*** 1. Complete migration of Fleet Management and Planning System (FLTMPS) capability into the ADE environment. 2. Develop APIs for Manpower Data and Career/Education Data. 3. Promote seven new inbound data sources into Single Source of Truth (SSOT) production environment, thereby making the data available to ADE users. 4. Complete, consolidate Navy Personnel Data Base (NPDB) capability make available for query and/or to make APIs. 5. Conduct cyber tasking for ADE Commercial Cloud ATO, build commercial cloud data marts. 6. Database replication implemented for three major transactional systems. 7. Initiate 35 outbound data interfaces.					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
8. Complete report and dashboard functionality in support of Supply Chain tasking. 9. Compete API to provide data to MNP MyRecord from ADE 2.0. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 increase of $0.350M is due to surge in outbound data interfaces.					
Title: Risk Management Information (RMI)	6.430	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2021 Plans: Funds realigned to PE 0608013N Project 2901 in FY21 and out. ***FY 2022 Base Plans:*** N/A ***FY 2022 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	102.007	137.429	140.520	0.000	140.520

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• OMN/3B4K: *Training Support*	6.319	8.567	18.892	-	18.892	-	-	-	-	-	-
• OMN / 4A4M: *Military Manpower and Personnel Mgmt*	64.342	132.583	181.254	-	181.254	-	-	-	-	-	-
• OMNR/4A4M: *Military Manpower and Personnel Mgt*	0.000	2.645	0.677	-	0.677	-	-	-	-	-	-
• OMN/1C1C: *Combat Communications and Electronic Warfare (CIVPERS)*	6.333	6.788	7.038	-	7.038	-	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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C. Other Program Funding Summary ($ in Millions)

Line Item	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

Remarks

MyNavy HR Transformation is not just a technology refresh of existing systems, Transformation is a holistic change to how MyNavy HR Services are provided. Simultaneous functional investment (O&M,N) in business processes re-engineering and acquisition investment (RDT&E) in IT is critical to increase quality, auditability, efficiency and overall personnel readiness to meet Navy readiness needs - both current and future.

1. OMN / 3B4K is required to support the sustainment costs associated with delivering a non-CAC Identity and Access Management (IdAM) capability across the MyNavy HR Enterprise that provides authentication, authorization and single sign on for access to the objective MPT&E capability. Additionally, to provide the ability to host and manage mobile applications developed through the Navy App Locker (past, present and future). In addition, continued operations and sustainment for the LS Transformation effort to acquire Software as a Service (SaaS) subscriptions, required interface maintenance with legacy systems; in addition to hosting N1 learning applications within the cloud environment. Lastly, Sustainment of SPOE system functionality to include additional Career Life Events, Mobile Applications, MNP Public Portal, and the credentialed identities of a larger user population which requires additional ICAM licenses

2. OMN / 4A4M This Budget Activity consists of costs required to support both the functional and acquisition requirements (in parallel with development of technology) to holistically transform and deliver an effective modernized IT Solution. These efforts include requirements generation, business process re-engineering, change and risk management. In FY22, MyNavy HR will be required to sustain pay capabilities deployed as part of IOC, increase support / demand at each of the MyNavy Career Centers, while continuing its momentum to build out analytic capabilities.

3. OMN / 1C1C is for Civilian Labor Salaries / costs to support MyNavy HR Transformation

4. OMNR / 4A4M is required to support IT Scaffolding of legacy IT Systems. Scaffolding is "throw-away" development required for transformation and the execution of the 55:1 Shutdown Plan. Due to the change in plan and moving towards a functional (vs. System) shutdown approach drives the need for IT Scaffolding as portions of IT system capabilities are retired between FY20 - 24

D. Acquisition Strategy

Each MyNavy HR pillar follows a progression of piloting activities to development of a Minimal Viable Product (MVP). Once an MVP is developed and is ready to be hardened to a production capability, the pillar employs the MyNavy HR Transformation Portfolio Coordinator and Production contract to ingest the MVP into an integrated technical baseline.

AUTHORITATIVE DATA ENVIRONMENT

The required services will be procured through multiple Cost Plus Fixed Fee (CPFF) task orders awarded on a competitive, multiple award, small business Indefinite Delivery / Indefinite Quantity (ID/IQ) contract for PMW 240 enterprise services, and also on a competitive, single award, large business Indefinite Delivery / Indefinite Quantity (ID/IQ) contract for tasking related to personnel and pay modernization.

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ENTERPRISE CUSTOMER RELATIONSHIP MANAGEMENT (eCRM)
The CRM solution strategy will be implemented using a variety of IDIQ contract task orders. Commercial off the shelf (COTS) software and integration services are being acquired through the IDIQ contract task orders.

LEARNING STACK (LS)
Use existing GWAC or competitive contract for any new product sourcing, use existing Bi-Service PeopleSoft licenses, Indefinite Delivery/Indefinite Quantity contract vehicles within PMW 240 for additional design and integration services. Leverage the Interagency Agreement for an Assisted Acquisition with the Office of Personnel Management's USA Learning program.

NAVY PERSONNEL AND PAY SYSTEM (NP2)
NP2 will incrementally implement Navy's personnel and pay modernization strategy using a variety of IDIQ contract task orders & multiple Technical Direction Letters issued under the MyNavy HR Transformation Portfolio Coordinator & Production contract. These task orders & Technical Direction Letters will use commercial off the shelf (COTS) software (PeopleSoft Global Payroll and PeopleSoft General Ledger) to extend the Navy Personnel and Pay (NP2) functionality based on PeopleSoft Human Capital Management

SINGLE POINT OF ENTRY (SPOE)
The required services will be procured through a competitive small business Indefinite Delivery / Indefinite Quantity (ID/IQ) Cost Plus Fixed Fee (CPFF) 8a contract.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
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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
Learning Stack (LS)	C/CPFF	OPM : Pensacola, FL	7.949	4.851	May 2020	11.000	May 2021	12.000	May 2022	-		12.000	-	-	-
MNP/SPOE	C/CPFF	Katmai : Arlington, VA	43.123	18.065	Dec 2019	17.700	Dec 2020	13.000	Dec 2021	-		13.000	-	-	-
AOA Design, Development, Test & Deployment	C/CPFF	GDIT : New Orleans, LA	1.792	0.000		0.000		0.000		-		0.000	-	-	-
NP2 Rapid Prototype Pilot	C/CPFF	GDIT/Na Ali : Washington, DC	22.194	15.678	Nov 2019	0.000		0.000		-		0.000	-	-	-
RMI SPM Development	C/CPFF	Kapsuun : Arlington, VA	10.809	6.430	Jun 2020	0.000		0.000		-		0.000	-	-	-
ADE + Data Analytics	C/CPFF	GDIT : Washington, D.C.	17.954	8.302	May 2020	8.000	May 2021	8.500	May 2022	-		8.500	-	-	-
Transformation Portfolio Coordinator and Production	C/IDIQ	CACI : Chantilly, VA	3.000	21.314	Nov 2019	44.159	Nov 2020	56.020	Nov 2021	-		56.020	-	-	-
CRM Pilot	C/IDDQ	Ideamatics : Mclean, VA	0.000	17.487	Feb 2020	17.487	Feb 2021	7.615	Feb 2022	-		7.615	-	-	-
NP2 Transformation	C/IDIQ	CACI / Na Ali : Chantilly, VA	41.711	0.000		26.700	Oct 2020	28.000	Oct 2021	-		28.000	-	-	-
		Subtotal	148.532	92.127		125.046		125.135		-		125.135	-	-	N/A

Remarks

The Transformation Portfolio Coordinator & Production (TPC&P) will deliver a family of systems in support of MyNavy HR Transformation. As MyNavy HR Solutions Minimal Viable Products (MVPs) are developed and capabilities fielded, development work will transition from pillar-based pilot activities to the TPC&P effort. The TPC&P will integrate those capabilities to coordinate a seamless, interoperable MyNavy HR IT Solution. In FY22, staffing for the TPC&P ramps up as NP2, SPOE, eCRM capabilities are fielded and embedded within the integrated solution.

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
CRM SAAS	C/IDIQ	Carahsoft : San Francisco, CA	0.000	9.880	Jan 2020	12.000	Jan 2021	15.000	Jan 2022	-		15.000	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		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
NSIPS Bi-Service License	C/CPFF	Oracle : Redwood City, CA	20.700	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	20.700	9.880		12.000		15.000		-		15.000	-	-	N/A

Remarks

$3M CRM SAAS increase attributed to vendor license cost increase for eCRM SAAS.

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
Testing and Evaluation NP2	C/FFP	COMOPTEVFOR : Arlington, VA	0.000	0.000		0.383	Dec 2020	0.385	Dec 2021	-		0.385	-	-	-
		Subtotal	0.000	0.000		0.383		0.385		-		0.385	-	-	N/A

Remarks

With the exception of NP2, programs are all either abbreviated acquisition programs or non-designated projects and do not require Independent Operational Test Evaluation (IOTE). Testing is performed in accordance with approved test plans by the business owners.

NP2: Testing is for technical and analytical support to 'Commander, Operational Test and Evaluation Force' (COMOPTEVFOR) in the definition, conduct and analysis of structured Initial Operational Test and Evaluation (IOT&E) of NP2

	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	169.232	102.007		137.429		140.520		-		140.520	-	-	N/A

Remarks

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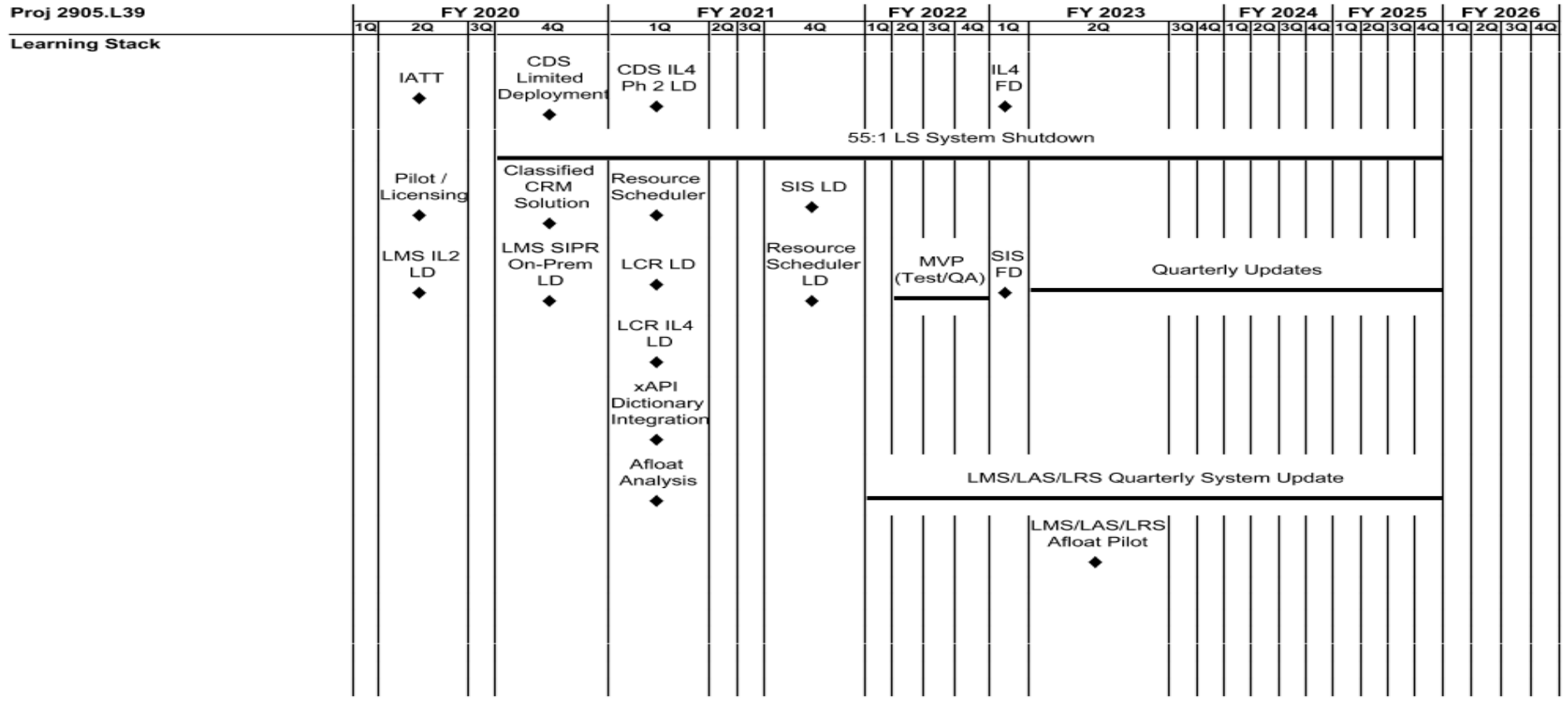

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
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NAVY PERSONNEL AND PAY (NP2)

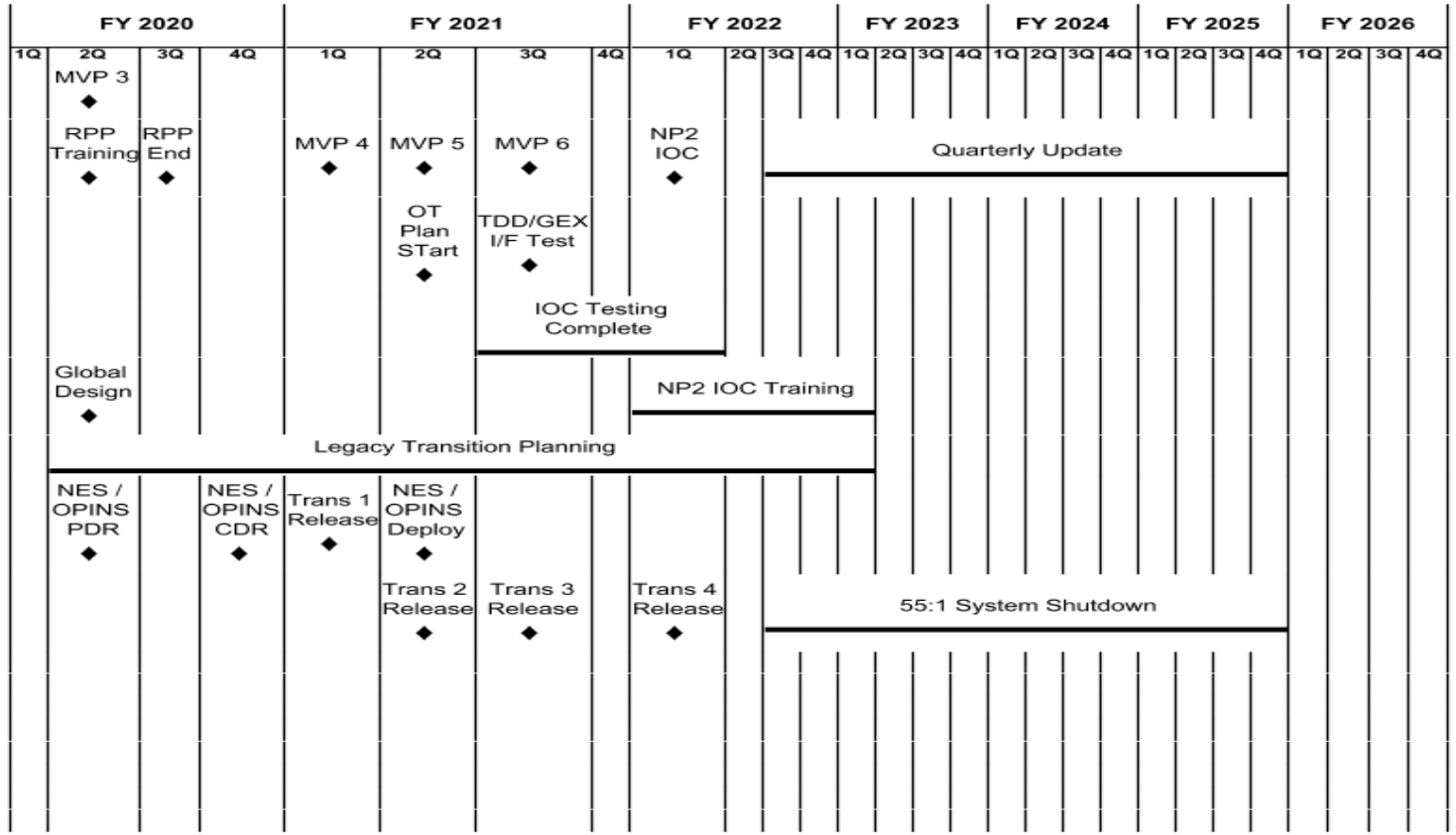

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
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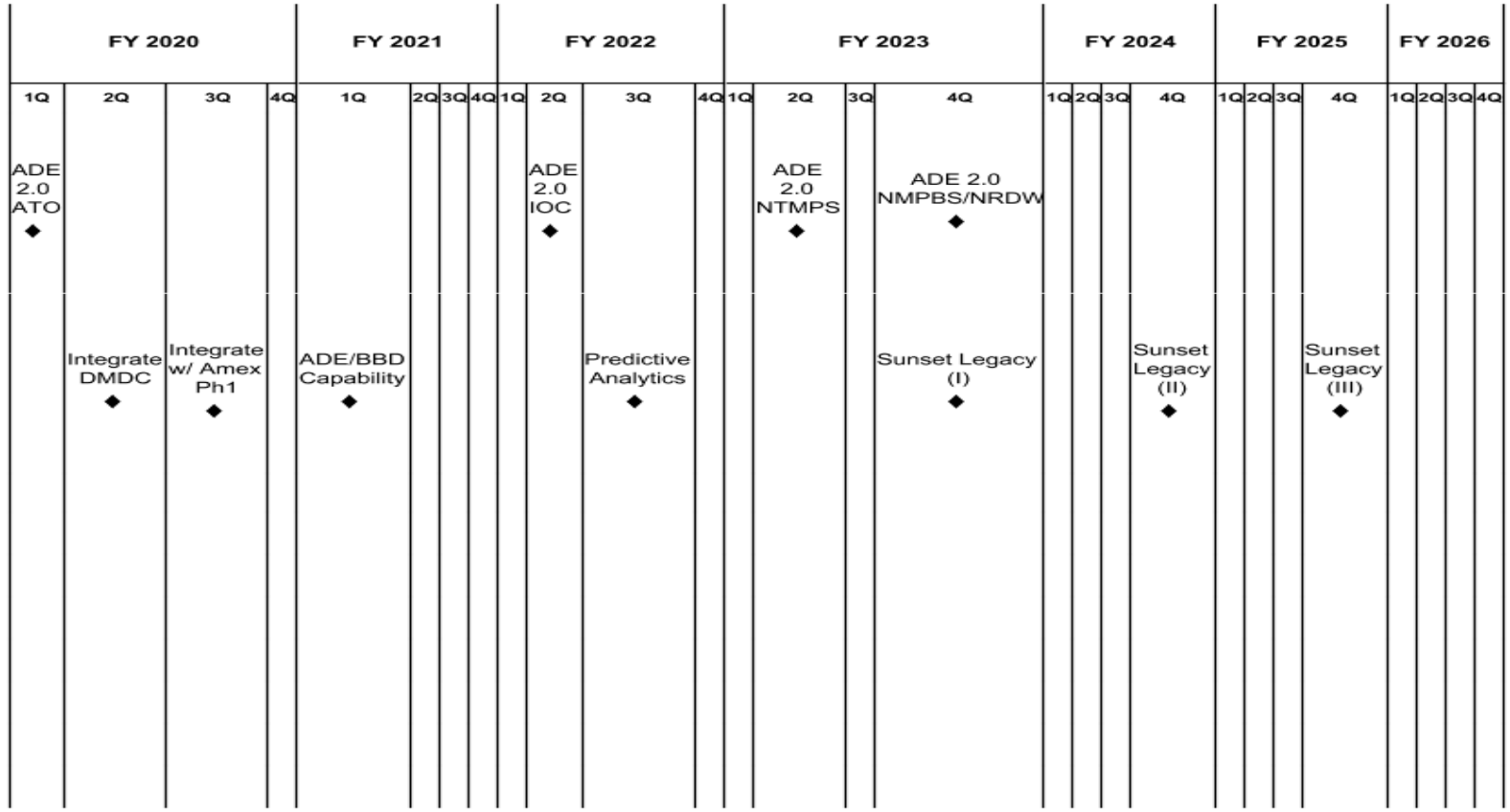

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
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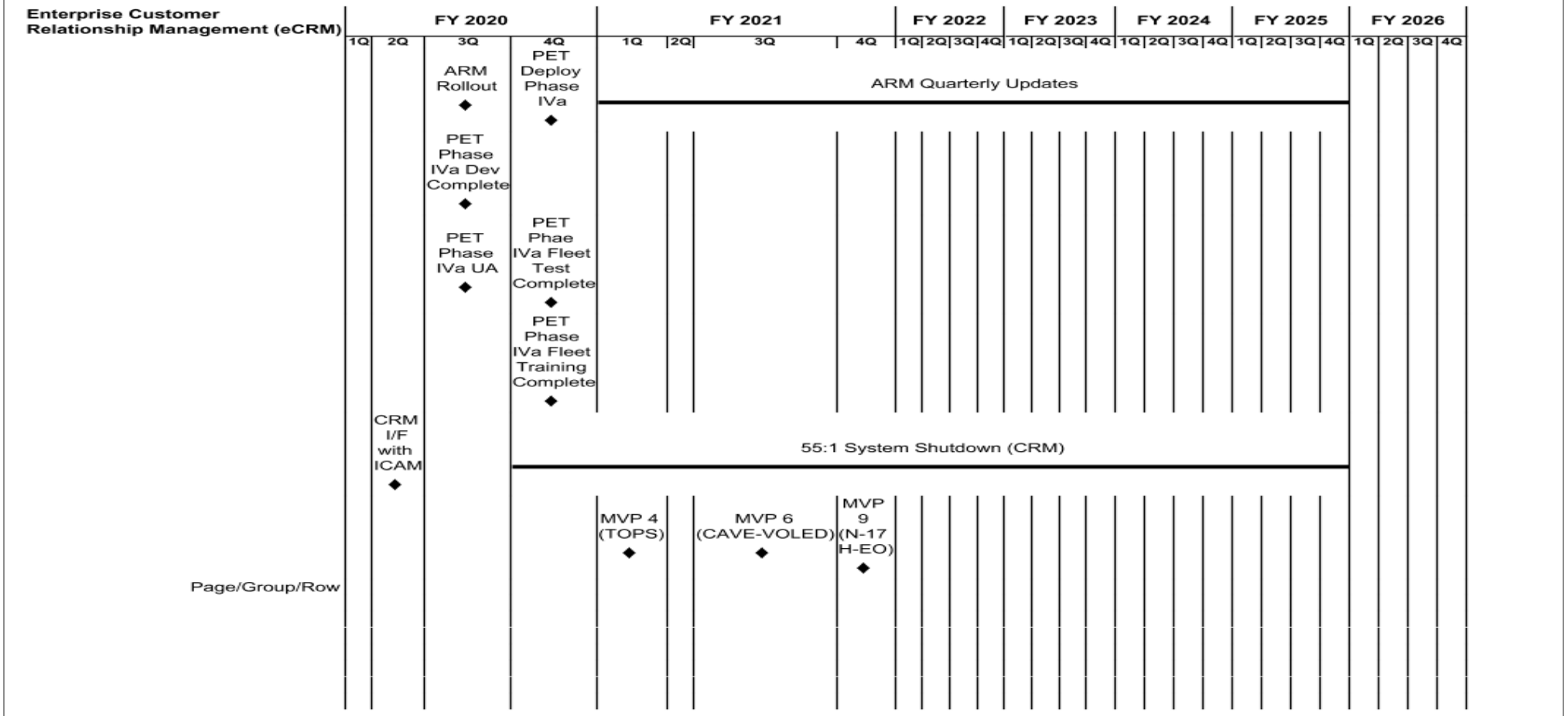

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
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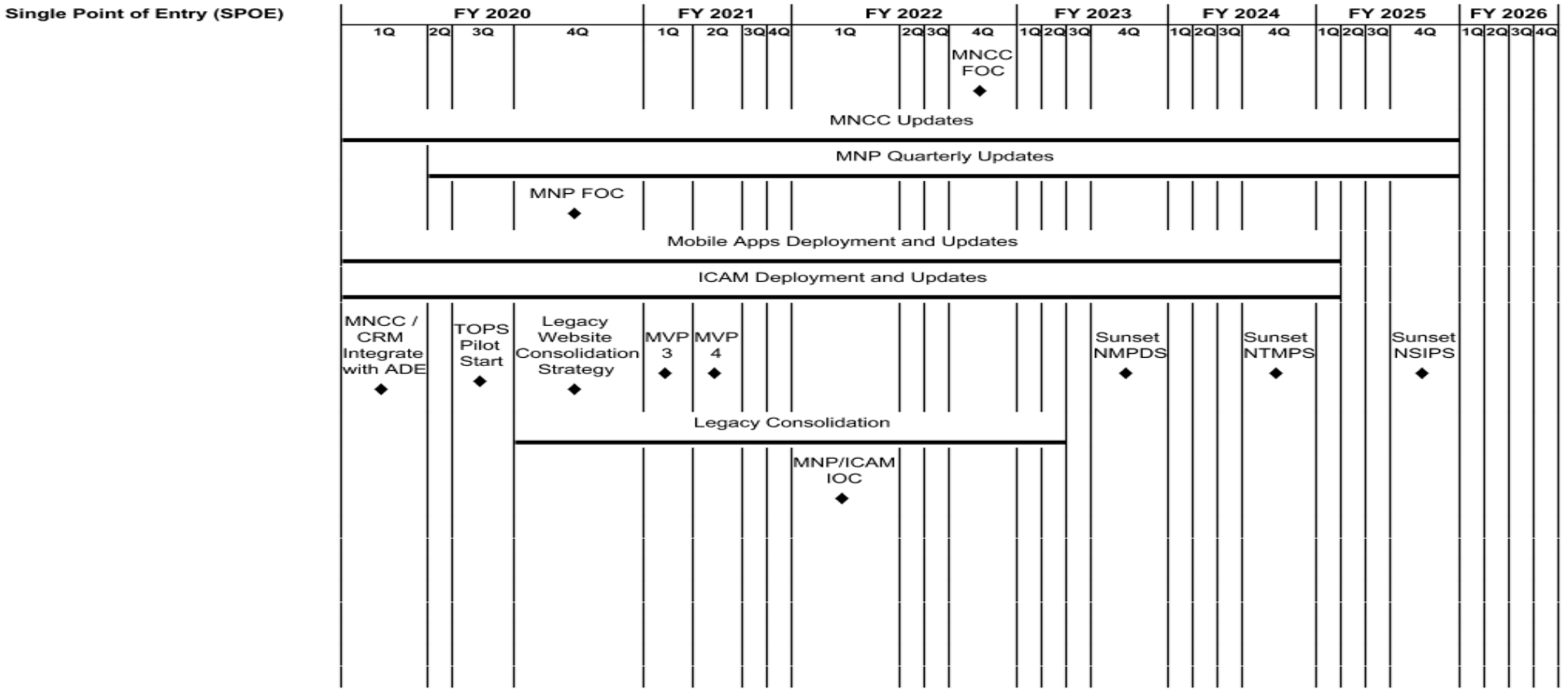

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
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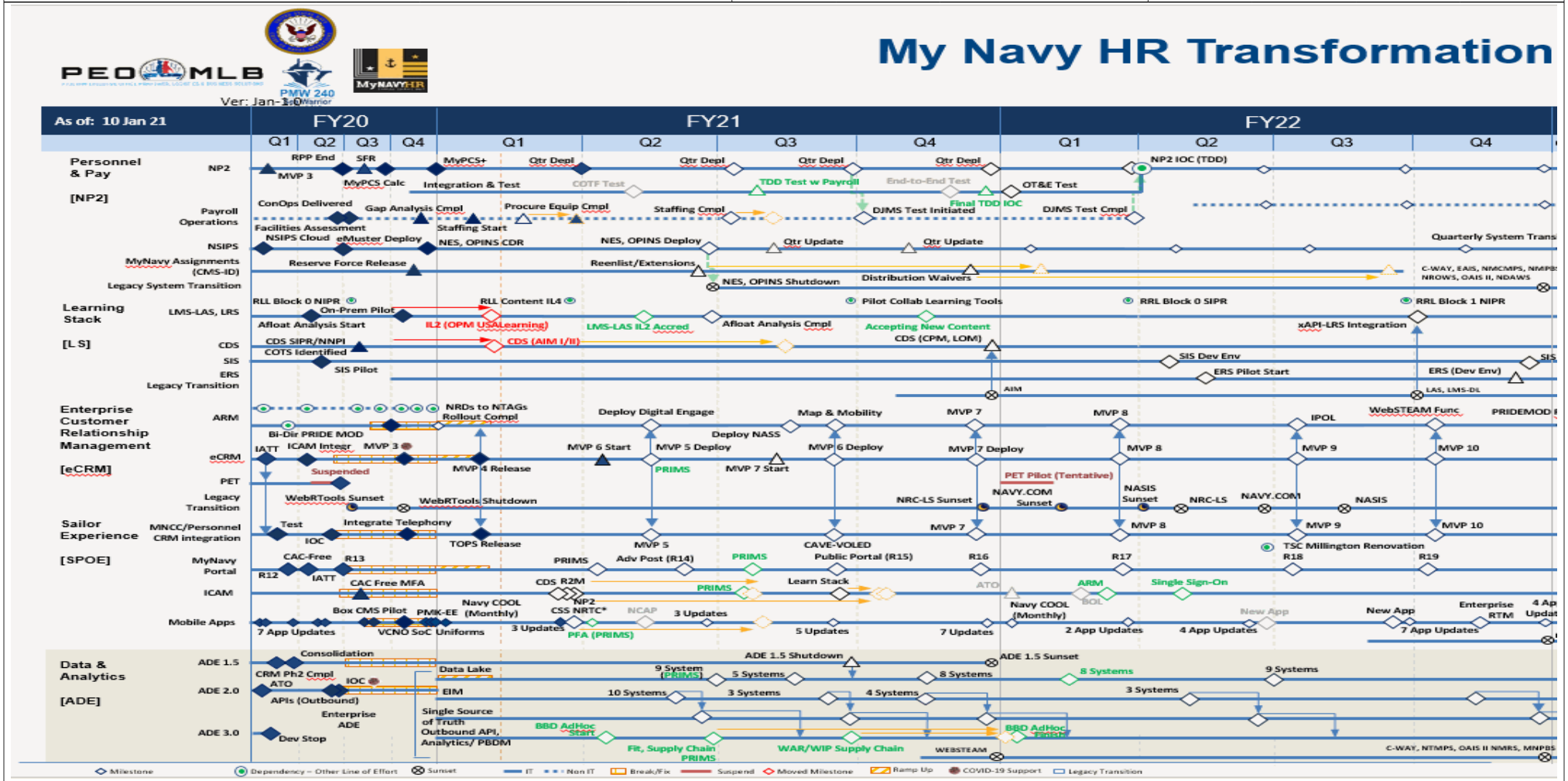

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2905.L39				
Learning Stack: LMS/LAS/LRS Interim Authority to Test	2	2020	2	2020
Learning Stack: Content Delivery System (AIM) Phase I (IL4) Limited Deployment	4	2020	4	2020
Learning Stack: Content Delivery System (AIM) Phase 2 (IL4) Limited Deployment	1	2021	1	2021
Learning Stack: MyNavy HR Transformation (LS) 55 to 1 System Shutdown	4	2020	4	2022
Learning Stack: Classified eCRM Solution	4	2020	4	2020
Learning Stack: Student Information System (SIS) Pilot Licensing	2	2020	2	2020
Learning Stack: Procure and Integrate Resource Scheduler	1	2021	1	2021
Learning Stack: Student Information System (SIS) Limited Deployment	4	2021	4	2021
Learning Stack: Student Information System (SIS) Resource Scheduler Limited Deployment	4	2021	4	2021
Learning Stack: Student Information System (SIS) CETARS Campus Solution	2	2022	4	2022
Learning Stack: Learning Management System (LMS) IL2 Limited Deployment	2	2020	2	2020
Learning Stack: Learning Management System (LMS) SIPR On-Premise	4	2020	4	2020
Learning Stack: Learning Content Repository (LCR) Limited Deployment	1	2021	1	2021
Learning Stack: Learning Content Repository (LCR) IL4 Limited Deployment	1	2021	1	2021
Learning Stack: Initiate xAPI Dictionary Integration	1	2021	1	2021
Learning Stack: LMS / LAS / LRS Afloat Analysis	1	2021	1	2021
Learning Stack: LMS / LAS / LRS Quarterly System Update	1	2022	4	2022
NAVY PERSONNEL AND PAY (NP2)				
NP2: Rapid Pilot Prototype Post Payroll, User Access Pilot, Orders Integration, PCS Transfer and Member Conversion MVPs	2	2020	2	2020
NP2: RPP Training Complete	2	2020	2	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2905 / *BUPERS IT*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
NP2: RPP (Street to Fleet) Complete	3	2020	3	2020
NP2: IOC Debts & Collections, Vendor Interfaces, Performance and Career Path MVPs	1	2021	1	2021
NP2: IOC PCS Travel Expenses, Reserve Activities, Separations and Job History Conversion MVPs	2	2021	2	2021
NP2: IOC inance, Payroll Reporting, Enroute Orders and Miscellaneous Conversion MVPs	3	2021	3	2021
NP2: IOC Complete	1	2022	1	2022
NP2: Quarterly System Updates	3	2022	4	2022
NP2: Integration and Testing	2	2021	2	2021
NP2: Integration and Testing: TDD / GEX I/F Test	3	2021	3	2021
NP2: Integration and Testing: IOC Testing	3	2021	1	2022
NP2: IOC Test Training	1	2022	4	2022
NP2: Legacy System Transition and Global Design Begin	2	2020	2	2020
NP2: Legacy System Transition and Global Design	2	2020	4	2022
NP2: Complete Preliminary Design Review of NES / OPINS Consolidation	2	2020	2	2020
NP2: Complete Critical Design Review of NES / OPINS Consolidation	4	2020	4	2020
NP2: Deploy NES / OPINS	2	2021	2	2021
NP2: Legacy Transition Functional Release 1	1	2021	1	2021
NP2: Legacy Transition Functional Release 2	2	2021	2	2021
NP2: Legacy Transition Functional Release 3	3	2021	3	2021
NP2: Legacy Transition Functional Release 4	1	2022	1	2022
MyNavy HR Transformation (NP2) 55 to 1 System Shutdown	3	2022	4	2022
Authoritative Data Environment (ADE)				
ADE 2.0 Authority to Operate	1	2020	1	2020
ADE 2.0 IOC (API Enterprise)	2	2022	2	2022

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2905 / *BUPERS IT*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ADE/BBD Capability Initiated	1	2021	1	2021
Integrate DMDC	2	2020	2	2020
Integrate w/ Amex Ph1	3	2020	3	2020
Predictive Dashboard	3	2022	3	2022
Enterprise Customer Relationship Management (eCRM)				
Complete Rollout of Applicant Relationship Management (ARM)	3	2020	3	2020
ARM Quarterly Updates	1	2021	4	2022
PET (eCRM) Coaching Phase IV	4	2020	4	2020
PET Phase IVa Development Complete	3	2020	3	2020
PET Phase IVa User Acceptance Testing	3	2020	3	2020
PET Phase IVa Fleet Testing Complete	4	2020	4	2020
PET Phase IVa Fleet Training Complete	4	2020	4	2020
MyNavy HR Transformation (eCRM) 55 to 1 System Shutdown	4	2020	4	2022
Interface and Go LIve with eCRM/ICAM Interface	2	2020	2	2020
Integrate MNCC/eCRM TOPS	1	2021	1	2021
Integrate MNCC/eCRM CAVE-VOLED	3	2021	3	2021
Integrate MNCC/eCRM N-17 H-EO	4	2021	4	2021
Single Point of Entry (SPOE)				
MNCC FOC	4	2022	4	2022
MNCC Updates	1	2020	4	2022
MNP Quarterly Updates	2	2020	4	2022
MNP FOC	4	2020	4	2020
Mobile Apps Deployment and Updates	1	2020	4	2022
ICAM Deployment and Updates	1	2020	4	2022
MNCC / eCRM Integration with ADE	1	2020	1	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2905 / *BUPERS IT*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MNCC / eCRM TOPS Pilot Start	3	2020	3	2020
MNCC / eCRM TOPS Rollout Start	1	2021	1	2021
MNCC / eCRM CAVE-VOLED Integration Start	2	2021	2	2021
Analyze legacy portal / website consolidation strategy	4	2020	4	2020
Legacy Website / Portal Consolidation	4	2020	4	2022
Achieve MNP/ICAM Single Sign-On IOC	1	2022	1	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				Project (Number/Name) 3167 / *Joint Technical Data Integration (JTDI)*			
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**
3167: *Joint Technical Data Integration (JTDI)*	41.321	5.331	7.680	5.952	-	5.952	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Joint Technical Data Integration (JTDI) Program - Funding provides an enterprise common data transport and storage solution for the Naval Enterprise's Integrated Data Environment. In addition to transporting authoritative technical data to maintainers in the ashore, afloat, and expeditionary environments, JTDI also automates the movement of CBM+ data generated by weapon systems deployed around the globe, consolidates and makes platform sensor data available for automated ingest into the Standard Data Repository, which provides modern, highly integrated analytic capabilities to enable CBM+. JTDI is a digital technical data access, delivery and local Organizational & Intermediate level library management toolset that improves accuracy and timeliness of technical manual and other technical data delivery, minimizes the Fleet's library management burden, and reduces maintenance work hours with a savings Return on Investment of 2.5:1. Funding supports the evaluation, testing and integration to develop a JTDI Government Off-The-Shelf (GOTS) solution for installation on Carrier and Amphibious Assault class ships, the Consolidated Afloat Networks and Enterprise Services Network (CANES), and at other globally deployed Navy/Marine Corps activities. JTDI is aligned with LOG IT digital transformation objectives and Navy Digital Roadmap.

Marine Aviation Logistics Enterprise Information Technology (MAL-EIT) - MAL-EIT funding supports the evaluation, development, testing and integration of software and hardware solutions across all US Marine Corps Aviation activities to be used in the planning and execution of geographically distributed, expeditionary Aviation Logistics (AVLOG) chains in support of deployed USMC Air Combat Element operations. The MAL-EIT Program is one of four programs contained within the Marine Aviation Logistics Support Program (MALSP) modernization program known as MALSP II. Legacy MALSP is nearly 25 years old and grossly inadequate in IT capability to meet the informational, planning, and C2 needs of a dynamic, geographically distributed nodal AVLOG system. MAL-EIT is a Defense Business System Abbreviated Acquisition Program that will develop and deliver the required IT capability necessary to eliminate the IT related gaps existing in the legacy MALSP. MAL-EIT is a family of IT solutions to be developed and delivered in three increments. These increments are depicted below:

Expeditionary Pack Up Kit (EPUK): Provides Expeditionary Supply Operations to include business administration, inventory, and customer service operations.

Next Generation Buffer Management System: Provides buffer management in a time domain, and buffer sizing analysis.

Logistics Planning Tool and Optimizer Tool: Provides capability to develop tailored Remote Expeditionary Support Packages, consumption forecasts, and Nodal Logistics Lay down designs.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**
Title: Joint Technical Data Integration (JTDI)	4.754	4.985	5.381	0.000	5.381

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3167 / *Joint Technical Data Integration (JTDI)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Articles:	-	-	-	-	-
FY 2021 Plans: Conduct development, modernization, obsolescence management, and cybersecurity mandated activities associated with a major release of fully deployed COTS-intensive JTDI system Version 2.0.7.0. Conduct COTS requirements definition, evaluation, integration, and testing of annual baseline releases. Perform development and testing to further enhance JTDI top-tier infrastructure to reduce system administration tasks, and improve user authentication and certificate management. Conduct modernization activities to include additional cloud capabilities per DoD cloud strategy 2018; commence integration of modules to enhance cyber security and enable tighter configuration control over globally deployed IT assets.					
FY 2022 Base Plans: Conduct development, modernization, obsolescence management, and cybersecurity mandated activities associated with a major release of fully deployed COTS-intensive JTDI system Version 2.0.7.5. Conduct COTS requirements definition, evaluation, integration, and testing of annual baseline releases. Perform development and testing to modernize top tier file management to reduce resource intensive tasks; extend cloud capabilities; automate configuration management modules; initial, limited capability to push analytics to the deployed/ distributed edge; continued integration of modules to enhance cyber security and enable tighter configuration control over globally deployed IT assets					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement: FY22 increase of $0.396M is due to higher costs for software engineering, integration, testing, and cybersecurity activities associated with development/modernization of JTDI system release 2.0.7.5					
Title: Marine Aviation Logistics Enterprise Information Technology (MAL-EIT)	0.577	2.695	0.571	0.000	0.571
Articles:	-	-	-	-	-
FY 2021 Plans: Complete fielding of Next Generation Buffer Management System (NGBMS)/MAL-EIT 3.1, begin updates to Expeditionary Pack-Up Kit (EPUK) and Logistics Planning Tool (LPT)/MAL-EIT 3.2 Software code to meet cybersecurity/cyber readiness mandate requirements, and complete Cloud Migration.					
FY 2022 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3167 / *Joint Technical Data Integration (JTDI)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Refinements to MAL-EIT and NOBLE communication link and required updates to MAL-EIT 3.3 software. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decrease of $2.124M is due to reduction in the amount of MAL-EIT software upgrades/technical refreshes/ refinements when NOBLE begins to be introduced.					
Accomplishments/Planned Programs Subtotals	5.331	7.680	5.952	0.000	5.952

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• OPN/4268/JTDI: *Joint Technical Data Integration (JTDI) Other Aviation Support Equipment*	2.365	2.392	2.355	-	2.355	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

Joint Technical Data Integration (JTDI) Program - The management approach includes the Logistics IT Portfolio Management Office residing in NAVAIR as part of Program Executive Office for Aviation Common Systems and Commercial Services (PEO(CS)). The evolutionary development approach will be used to execute requirements. Contracting for the prime integrator will be via competitively awarded indefinite delivery - indefinite quantity contracts.

Marine Aviation Logistics Enterprise Information Technology (MAL-EIT) Program - The management approach includes the Logistics IT Portfolio Management Office residing within NAVAIR as part of Program Executive Office for Aviation Common Systems and Commercial Services (PEO(CS)) and Milestone Decision Authority delegated to NAVAIR Sustainment Group. The evolutionary development approach will be used to execute requirements. Contracting for the prime integrator will be via competitively awarded cost plus fixed fee contracts.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3167 / *Joint Technical Data Integration (JTDI)*

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
Software Development/ Hardware Integration for Marine Aviation Logistics Enterprise Information Technology (MAL-EIT)	C/CPFF	KBR : Patuxent River, MD	7.663	0.000		1.377	Oct 2020	0.200	Oct 2021	-		0.200	-	-	-
Prior year support no longer funded in the FYDP	Various	Various : Various	23.079	0.000		0.000		0.000		-		0.000	-	-	-
Software Development for JTDI	C/FFP	KBR : Patuxent River, MD	0.000	2.738	May 2020	2.876	May 2021	3.031	May 2022	-		3.031	-	-	-
Software Development/ Hardware Integration for Marine Aviation Logistics Enterprise Information Technology (MAL-EIT)	C/FFP	ASI : Patuxent River, MD	0.000	0.559	Apr 2020	0.375	Oct 2020	0.150	Oct 2021	-		0.150	-	-	-
		Subtotal	30.742	3.297		4.628		3.381		-		3.381	-	-	N/A

Remarks

JTDI increase in FY22 is due to higher costs for software engineering, integration, testing, and cybersecurity activities associated with development/modernization of JTDI system release 2.0.7.5

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
Developmental Test & Evaluation for MAL-EIT	C/CPFF	KBR : Patuxent River, MD	1.291	0.000		0.404	Jan 2021	0.150	Oct 2021	-		0.150	-	-	-
Prior year Test & Eval no longer funded in the FYDP	Various	Various : Various	3.080	0.000		0.000		0.000		-		0.000	-	-	-
Developmental Test & Evaluation JTDI	C/FFP	KBR : Patuxent River, MD	0.000	1.577	May 2020	1.614	May 2021	1.789	May 2022	-		1.789	-	-	-
		Subtotal	4.371	1.577		2.018		1.939		-		1.939	-	-	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*	Project (Number/Name) 3167 / *Joint Technical Data Integration (JTDI)*	

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

Remarks

JTDI increase in FY22 is due to higher costs for software engineering, integration, testing, and cybersecurity activities associated with development/modernization of JTDI system release 2.0.7.5

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 Support MAL-EIT	WR	NAWCAD : Patuxent River, MD	0.408	0.018	Nov 2019	0.000		0.000		-		0.000	-	-	-
Program Management Support MAL-EIT	C/CPFF	KBR : Patuxent River, MD	1.579	0.000		0.539	Jan 2021	0.100	Oct 2021	-		0.100	-	-	-
Prior year Mgmt Svcs Cost no longer funded in the FYDP	Various	Various : Various	1.473	0.000		0.000		0.000		-		0.000	-	-	-
Systems Engineering Support - JTDI	WR	NAWCAD : Patuxent River, MD	2.748	0.094	Nov 2019	0.000		0.000		-		0.000	-	-	-
Systems Engineering Support - JTDI	C/FFP	KBR : Patuxent River, MD	0.000	0.345	May 2020	0.495	May 2021	0.532	May 2022	-		0.532	-	-	-
		Subtotal	6.208	0.457		1.034		0.632		-		0.632	-	-	N/A

Remarks

JTDI increase in FY22 is due to higher costs for software engineering, integration, testing, and cybersecurity activities associated with development/modernization of JTDI system release 2.0.7.5

	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	41.321	5.331		7.680		5.952		-		5.952	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3167 / *Joint Technical Data Integration (JTDI)*

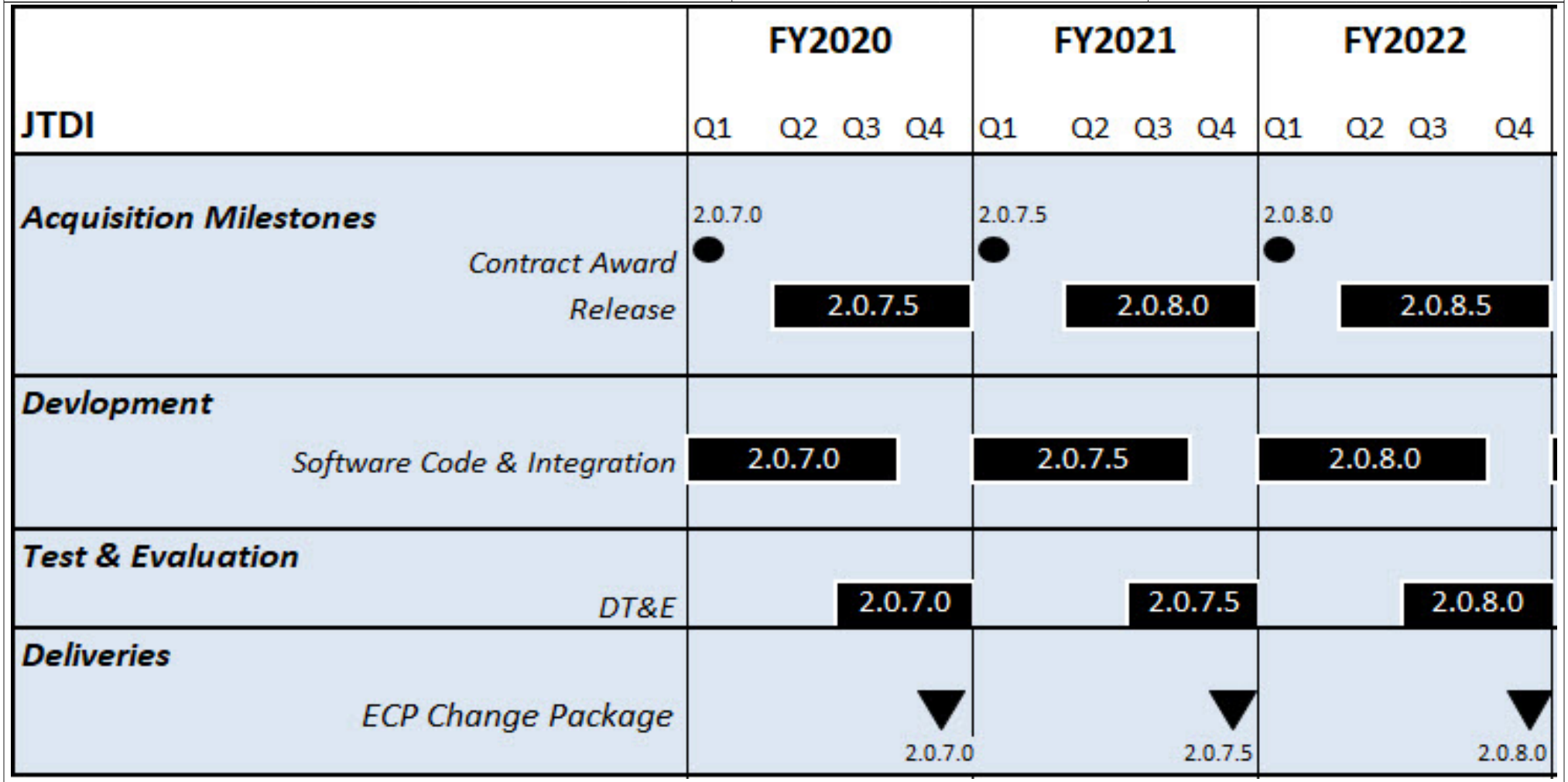


Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3167 / *Joint Technical Data Integration (JTDI)*

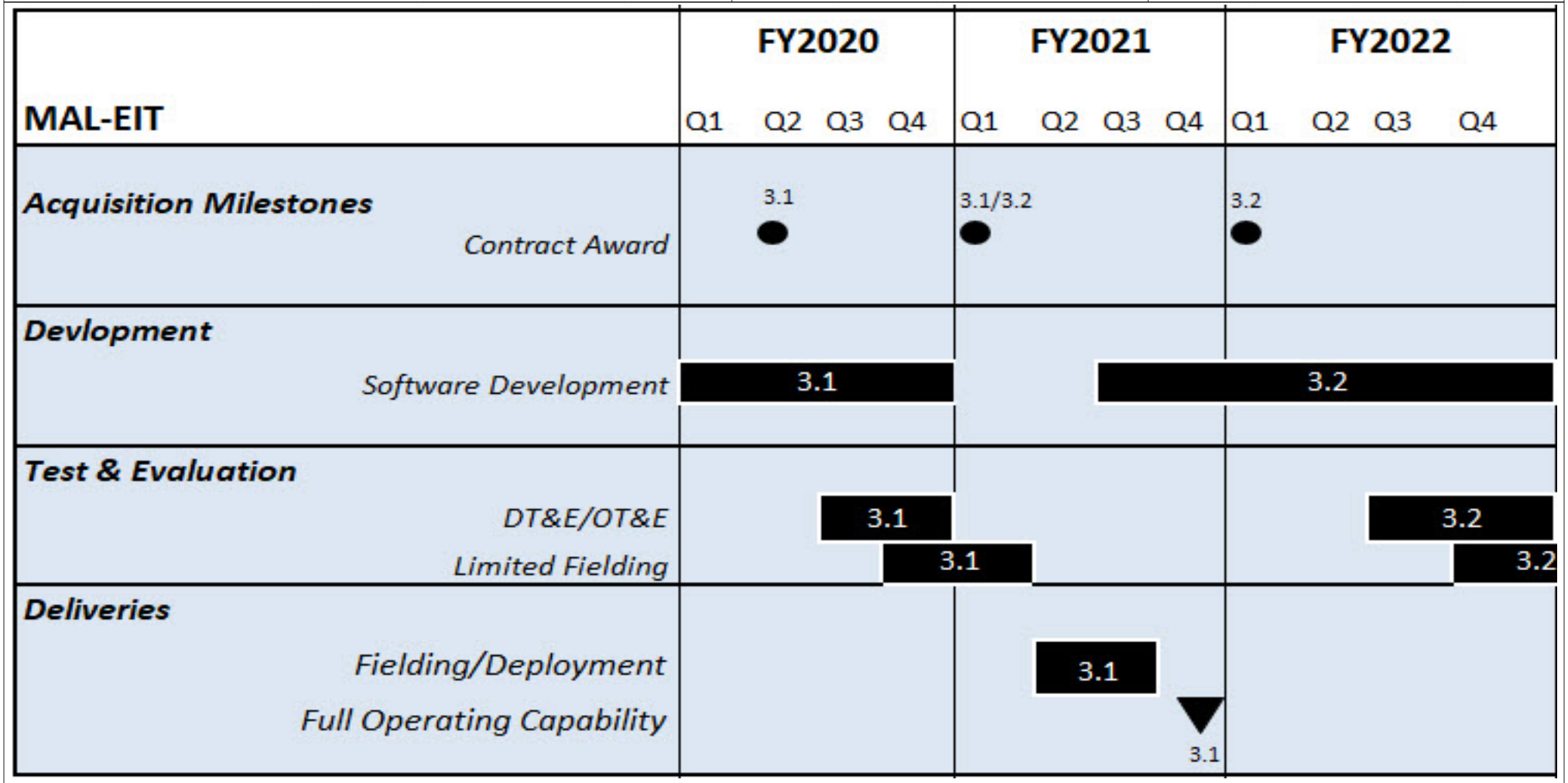


Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3167 / *Joint Technical Data Integration (JTDI)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
JTDI				
Release 2.0.7.5	2	2020	4	2020
Release 2.0.8.0	2	2021	4	2021
Release 2.0.8.5	2	2022	4	2022
Contract Award, Release 2.0.7.0	1	2020	1	2020
Contract Award, Release 2.0.7.5	1	2021	1	2021
Contract Award, Release 2.0.8.0	1	2022	1	2022
Development: Software Code & Integration: Release 2.0.7.0	1	2020	3	2020
Development: Software Code & Integration: Release 2.0.7.5	1	2021	3	2021
Development: Software Code & Integration: Release 2.0.8.0	1	2022	3	2022
DT&E: Developmental Test & Evaluation: Release 2.0.7.0	3	2020	4	2020
DT&E: Developmental Test & Evaluation: Release 2.0.7.5	3	2021	4	2021
DT&E: Developmental Test & Evaluation: Release 2.0.8.0	3	2022	4	2022
DT&E: Engineering Change Package: Release 2.0.7.0	4	2020	4	2020
DT&E: Engineering Change Package: Release 2.0.7.5	4	2021	4	2021
DT&E: Engineering Change Package: Release 2.0.8.0	4	2022	4	2022
MAL-EIT				
Acquisition Milestone: Contract Award: Contract Award (8)	2	2020	2	2020
Acquisition Milestone: Contract Award: Contract Award (9)	1	2021	1	2021
Acquisition Milestone: Contract Award: Contract Award (10)	1	2022	1	2022
Acquisition Milestone: Software Development: Software Development (4)	1	2020	4	2020
Acquisition Milestone: Software Development: Software Development (5)	3	2021	4	2022

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3167 / *Joint Technical Data Integration (JTDI)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test & Evaluation: Technical Evaluation DT&E/OT&E: Technical Evaluation DT&E/ OT&E (5)	3	2020	4	2020
Test & Evaluation: Technical Evaluation DT&E/OT&E: Technical Evaluation DT&E/ OT&E (6)	3	2022	4	2022
Test & Evaluation: Limited Fielding: Limited Fielding (4)	4	2020	1	2021
Test & Evaluation: Limited Fielding: Limited Fielding (5)	4	2022	4	2022
Deliveries: Fielding/Deloyment: Fielding/Deployment (3)	2	2021	3	2021
Deliveries: Full Operating Capability: Full Operating Capability (4)	4	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy												Date: May 2021
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				Project (Number/Name) 3185 / *Joint Airlift Information System (JALIS)*			
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**
3185: *Joint Airlift Information System (JALIS)*	2.688	0.335	0.306	0.365	-	0.365	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

JALIS is an operational scheduling and aircraft management system that facilitates real-time data analysis. JALIS is a critical element in the management of DoD air logistics assets. JALIS allows:

(1) DoD Service Personnel to submit airlift requirements for DoD Personnel and cargo
(2) Air Logistics Flying Units to communicate their aircraft availability in a real-time graphic display
(3) Designated Scheduling Organizations to compare airlift requirements with available aircraft
(4) Designated Scheduling Organizations to create mission assignments

JALIS informs applicable users of mission details and modifications by using a combination of system displays and email updates. JALIS is geographically distributed and has a user base in excess of 4,000 members. JALIS facilitates the movement of thousands of DoD Personnel and tons of cargo annually in support of the following:

(1) Navy Unique Fleet Essential Airlift
(2) Army's Operational Support Airlift Agency (OSAA)
(3) United States Transportation Command (USTRANSCOM)
(4) United States Marine Corps (USMC)

The Joint Chiefs of Staff mandates JALIS as the official DoD Airlift scheduling system for Operational Support Airlift (OSA). JALIS meets the requirement for multi-service coordinated Air Logistics scheduling as directed by Chairman, Joint Chiefs of Staff. The Navy is designated as lead agency for sponsoring and funding the JALIS program.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**
Title: Joint Air Logistic Information System (JALIS)	0.335	0.306	0.365	0.000	0.365
Articles:	-	-	-	-	-
FY 2021 Plans:					
1. Develop and integrate aircraft scheduling optimization tools to increase aircraft utilization efficiency.					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3185 / *Joint Airlift Information System (JALIS)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
2. Continue design and development of new user interface displays that will consolidate functions currently distributed throughout the system. ***FY 2022 Base Plans:*** Upgrade release 2.33 will concentrate on developing a new user interface that does not require Microsoft Internet Explorer. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 increase of $0.059M supports additional browser support design and testing sprints for release 2.33.					
Accomplishments/Planned Programs Subtotals	0.335	0.306	0.365	0.000	0.365

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

As a general rule, IT development programs use an agile software development methodology therefore milestones, tasks and phases are often conducted in parallel vice sequentially.

Contract activities will focus on developing the following capabilities:

(1) Improved functionality for flight scheduling
(2) Improved coordination between JALIS scheduling organizations
(3) Integration of JALIS and JALIS Dashboard functions

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3185 / *Joint Airlift Information System (JALIS)*

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
Development, Analysis and QA support	C/CPFF	NAVWAR : New Orleans, LA	2.688	0.335	Feb 2020	0.306	Feb 2021	0.365	Feb 2022	-		0.365	-	-	-
		Subtotal	2.688	0.335		0.306		0.365		-		0.365	-	-	N/A

Remarks

Development efforts are focused on improving system querying and reporting performance, as well as automating and simplifying common user tasks.

	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	2.688	0.335		0.306		0.365		-		0.365	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3185 / *Joint Airlift Information System (JALIS)*

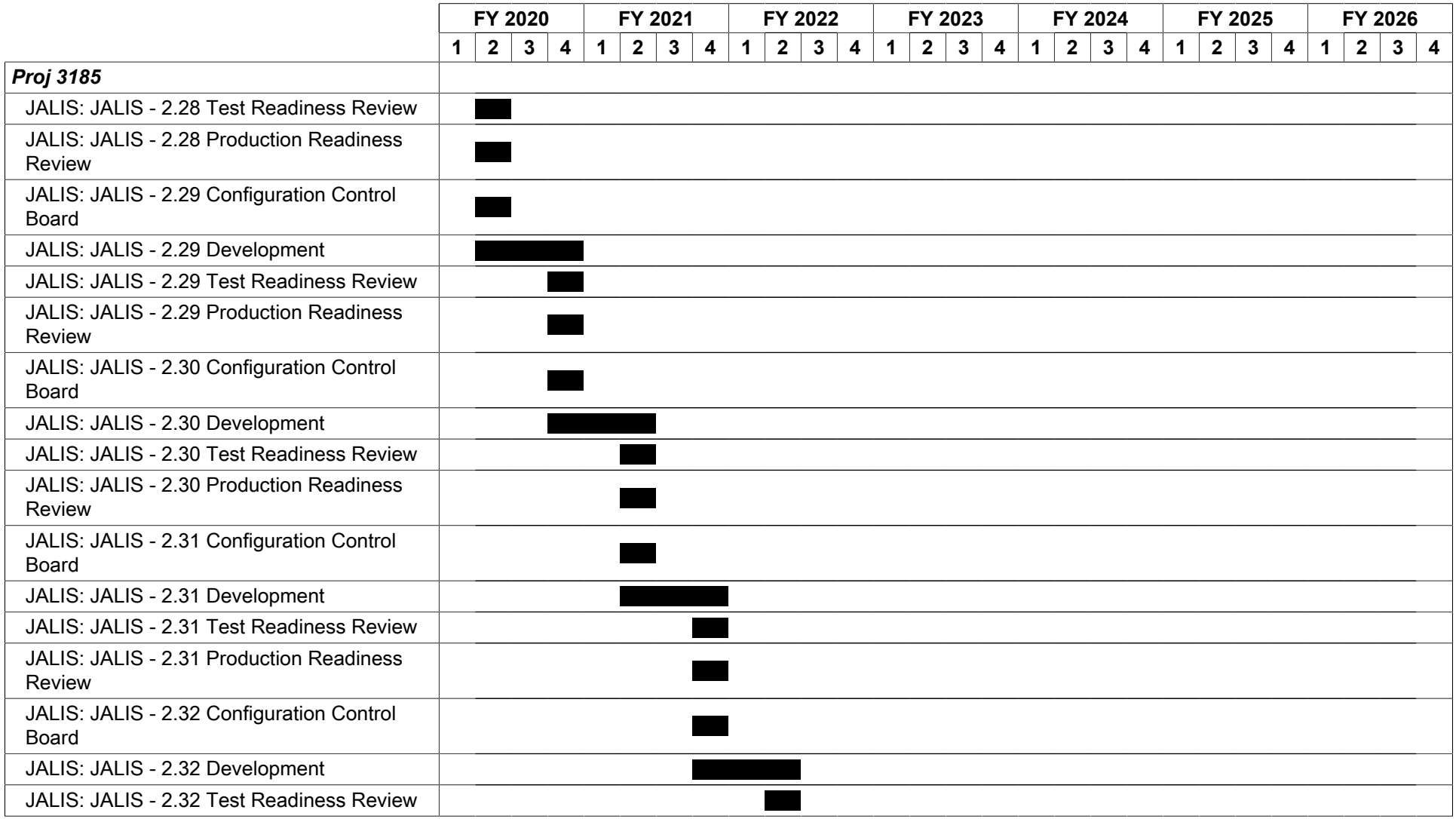


Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3185 / *Joint Airlift Information System (JALIS)*

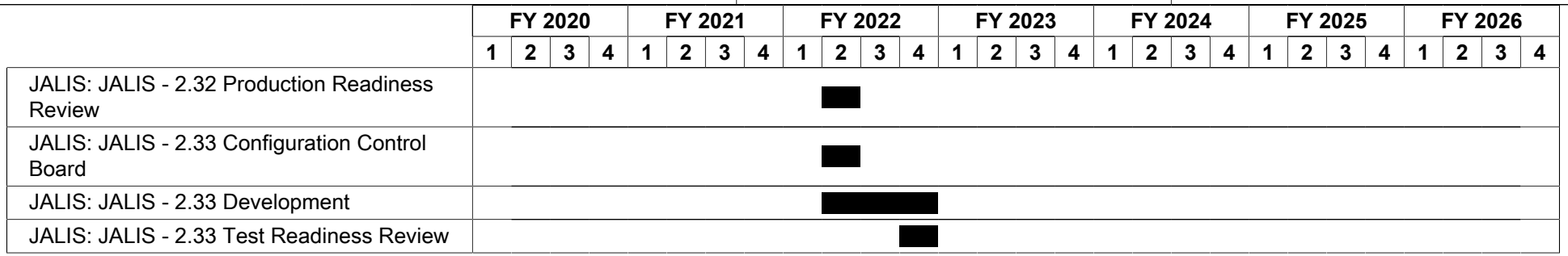


Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3185 / *Joint Airlift Information System (JALIS)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3185				
JALIS: JALIS - 2.28 Test Readiness Review	2	2020	2	2020
JALIS: JALIS - 2.28 Production Readiness Review	2	2020	2	2020
JALIS: JALIS - 2.29 Configuration Control Board	2	2020	2	2020
JALIS: JALIS - 2.29 Development	2	2020	4	2020
JALIS: JALIS - 2.29 Test Readiness Review	4	2020	4	2020
JALIS: JALIS - 2.29 Production Readiness Review	4	2020	4	2020
JALIS: JALIS - 2.30 Configuration Control Board	4	2020	4	2020
JALIS: JALIS - 2.30 Development	4	2020	2	2021
JALIS: JALIS - 2.30 Test Readiness Review	2	2021	2	2021
JALIS: JALIS - 2.30 Production Readiness Review	2	2021	2	2021
JALIS: JALIS - 2.31 Configuration Control Board	2	2021	2	2021
JALIS: JALIS - 2.31 Development	2	2021	4	2021
JALIS: JALIS - 2.31 Test Readiness Review	4	2021	4	2021
JALIS: JALIS - 2.31 Production Readiness Review	4	2021	4	2021
JALIS: JALIS - 2.32 Configuration Control Board	4	2021	4	2021
JALIS: JALIS - 2.32 Development	4	2021	2	2022
JALIS: JALIS - 2.32 Test Readiness Review	2	2022	2	2022
JALIS: JALIS - 2.32 Production Readiness Review	2	2022	2	2022
JALIS: JALIS - 2.33 Configuration Control Board	2	2022	2	2022
JALIS: JALIS - 2.33 Development	2	2022	4	2022
JALIS: JALIS - 2.33 Test Readiness Review	4	2022	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy												Date: May 2021
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				Project (Number/Name) 3432 / *NMMES-TR*			
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**
3432: *NMMES-TR*	31.754	41.874	8.965	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

FY22 funding of zero represents the consolidation of the NMMES-TR and NOBLE programs into a single integrated development effort with all future activities and funding to be pursued through the NOBLE program, RDTEN Program Element 0604231N Project 3260.

A. Mission Description and Budget Item Justification

The NMMES-TR is an Information Technology (IT) acquisition program that will provide a sustainable enterprise IT solution leveraging Commercial, Off-The-Shelf (COTS) technology and business processes for shore maritime maintenance. Unlike the uniquely custom designed status quo toolset, the NMMES-TR solution will not implement extensive product customization to match the current maintenance business processes; but rather, maintenance business processes will be modified to match the software solution, thereby adopting industry best practices. Accordingly, the solution will be more flexible to the BPR process, and more agile to capitalize on efficiency improvement opportunities and innovations. This will facilitate alignment with the Optimized Fleet Response Plan (OFRP) by assisting the maintenance activities with accomplishing assigned tasks as planned in order that submarines, aircraft carriers, and surface ships can properly train and deploy on schedule. NMMES-TR will also provide a modern solution that will be more effective and efficient in combating cybersecurity threats, and capable of continuous monitoring.

FY22 funding of zero represents the consolidation of the NMMES-TR and NOBLE programs into a single integrated development effort with all future activities and funding to be pursued through the NOBLE program, RDTEN Program Element 0604231N Project 3260.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Systems Integration and MRO/PPM Solution	41.874	8.965	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2021 Plans: During FY20, and concurrent with the NMMES-TR pre-acquisition effort, the DON developed the Department of Navy FY 21 Logistics IT Portfolio Plan to implement the consolidation of Navy Logistics Information Technology (LOG IT) transformation investments. In January 2020, DON issued a LOG IT portfolio Acquisition Decision Memorandum (ADM) to pursue a single MRO, a single SCM, and a single IDE authoritative data environment on a common platform. The LOG IT portfolio incorporates the NMMES-TR acquisition into the foundation of the portfolio, and specifically the FY20 and FY21 efforts to consolidate the NMMES-TR investment and the Naval Operational Business Logistics Enterprise (NOBLE) Family of Systems (FoS) to streamline investments and					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3432 / *NMMES-TR*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
accelerate Operational, Intermediate, and Depot (OI&D) level maintenance capability delivery for the Aviation and Maritime domains. ***FY 2022 Base Plans:*** N/A ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 funding of zero represents the consolidation of the NMMES-TR and NOBLE programs into a single integrated development effort with all future activities and funding to be pursued through the NOBLE program, RDTEN Program Element 0604231N Project 3260.					
Accomplishments/Planned Programs Subtotals	41.874	8.965	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Based on the results of the Analysis of Alternatives completed in FY17, NMMES-TR will acquire cloud hosted COTS applications using an incremental approach based on the required functionality for the shore maritime maintenance community. This program will integrate the following Mission Tasks; Maintenance, Repair and Overhaul (MRO), Project and Portfolio Management, Supply Chain Management, Environmental Safety and Occupational Health (ESOH) and Data Analytics. The program will use a third-party Systems Integrator to integrate existing legacy systems with cloud hosted COTS applications that will be deployed to the Navy's Regional Maintenance Centers, public naval shipyards, ship repair facilities, and other maintenance activities. The incremental approach provides off ramps in the event that not all functionality can be delivered within the cost/schedule/performance constraints of the program.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*	Project (Number/Name) 3432 / *NMMES-TR*	

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
NOBLE Prototype	SS/CPFF	Army PEO STRI : Orlando, FL	11.000	18.950	Aug 2020	4.142	Mar 2021	0.000		-		0.000	-	-	-
Risk Reduction Pilot	C/CPFF	Kapsuun : WNY	7.400	3.351	Jun 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	18.400	22.301		4.142		0.000		-		0.000	-	-	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
PMO Support	Various	Various : WNY & Norfolk	9.854	12.500	Mar 2020	2.626	Mar 2021	0.000		-		0.000	-	-	-
Community of Practice	WR	Various : Various	3.500	6.678	Mar 2020	1.707	Mar 2021	0.000		-		0.000	-	-	-
		Subtotal	13.354	19.178		4.333		0.000		-		0.000	-	-	N/A

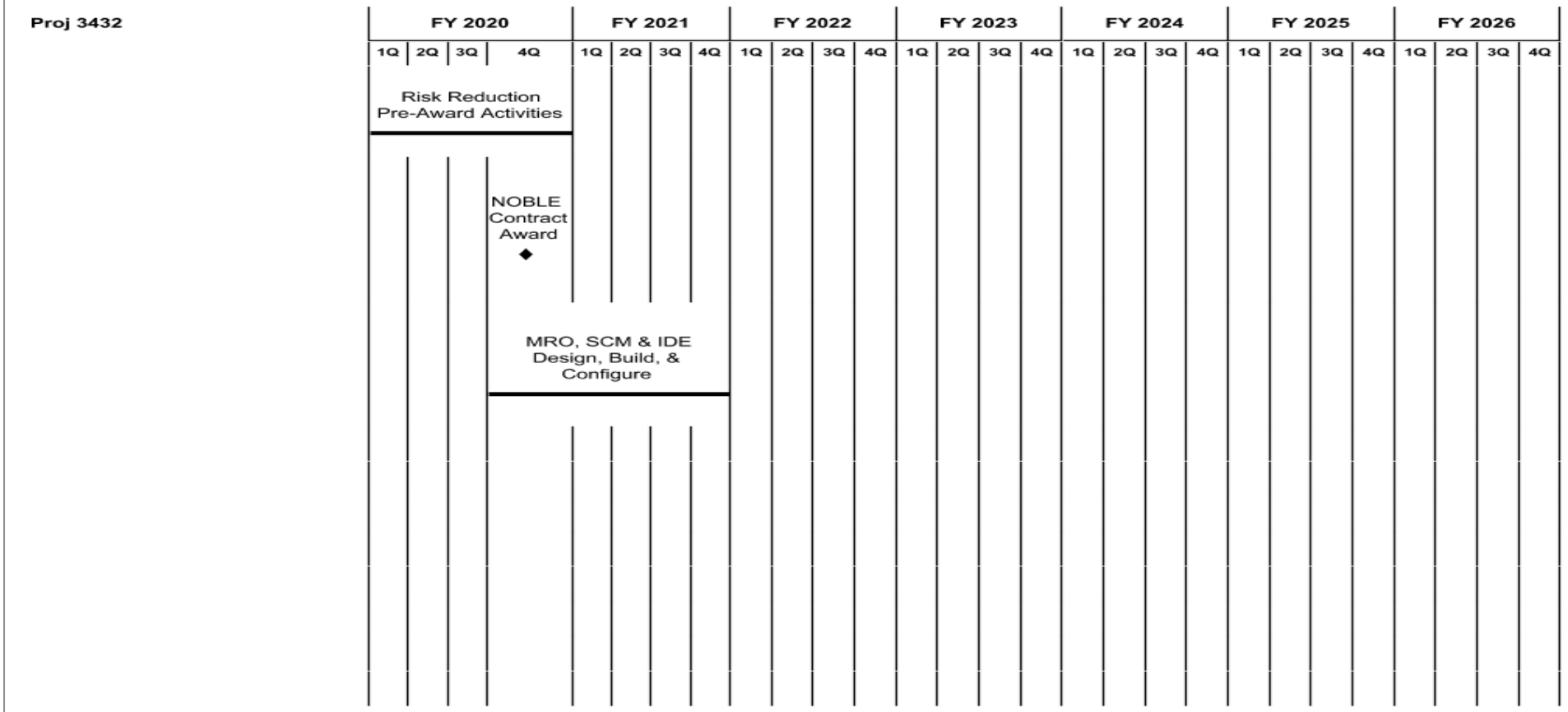
Test and Evaluation ($ in Millions)

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
JITC	MIPR	Fort Huachuca : AZ	0.000	0.032	Oct 2019	0.048	Oct 2020	0.000		-		0.000	-	-	-
Cyber Security	MIPR	Various : Various	0.000	0.363	Oct 2019	0.442	Oct 2020	0.000		-		0.000	-	-	-
		Subtotal	0.000	0.395		0.490		0.000		-		0.000	-	-	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	31.754	41.874		8.965		0.000		-		0.000	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3432 / *NMMES-TR*



2022PB - 0605013N - 3432

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3432 / *NMMES-TR*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3432				
Risk Reduction Pre-Award Activities	1	2020	4	2020
NOBLE Contract Award	4	2020	4	2020
MRO, SCM & IDE Design, Build, & Configure	4	2020	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				Project (Number/Name) 3784 / *Judge Advocate General (JAG) Enterprise System*			
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**
3784: *Judge Advocate General (JAG) Enterprise System*	0.000	1.058	0.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Judge Advocate General (JAG) will migrate all current JAG Enterprise System (JES) modules to Microsoft Azure Services and Dynamics 365 as Software as a Service (SaaS) in a DoD-approved Commercial Cloud environment. JAG/Naval Legal Service Command (NLSC) currently has one hosted business system named the JAG Enterprise System (JES.) The JES hardware and virtual servers are hosted in the Navy Criminal Investigative Service (NCIS) data center on Quantico, VA. The hardware servers are at end of life and require replacement or virtualization, the software is outdated and requires upgrading, and NCIS requires that JAG seek another hosting platform outside of the NCIS datacenter by 2020. The office of the Judge Advocate General adjudicates a large volume of Claims, Reports and other pertinent Legal documentation which needs to be maintained and accessed quickly.

The JES replacement solution will modernize and automate six crucial functions of the JAG/NLSC organizations:

1. Tort Claims (including Admiralty)
2. Medical Claims
3. Personal & Property Claims
4. Investigations
5. JAG Recruiting and Accessions
6. Legal Assistance

Detailed module information and their function

1) The Claims and Investigations Module: The Claims and Tort Litigation Division (Code 15) has worldwide responsibility for processing different types of claims under various statutes and regulations. Code 15 utilizes JES to process approximately 45,000 claims each year, with claims paid and recovered totaling $60-$70 million. Code 15 is also the custodian and designated release authority for all command investigations convened pursuant to Chapter II of the Manual of the Judge Advocate General conducted prior to December 1995, and all litigation report investigations. These records are all stored in JES. Code 15 is not the custodian or release authority for command investigations convened after December 1995 nor investigations involving breaches of classified information or information security regulations maintained by the Chief of Naval Operations.

2) The Recruiting and Accessions Module: Military Personnel (Code 61) utilizes JES to evaluate applicant qualifications for selection to participate in the Judge Advocate General Corps (JAGC); to evaluate applicant performance in the JAGC internship/externship program; to evaluate and improve the JAGC application and selection process; to conduct statistical analysis for internal management purposes; to manage the officers of the JAGC since the Judge Advocate General is statutorily

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3784 / *Judge Advocate General (JAG) Enterprise System*

required to make a recommendation on the assignment of all active-duty JAGC officers; to determine qualifications of an officer to receive a JAGC designation and to be certified as a trial or defense counsel; to determine the rotation dates and release from active-duty dates of JAGC officers, as well as the date new officers will be available for duty; to prepare JAGC strength plans for submission to the Office of the Chief of Naval Operations; and to obtain an officer's preference for duty assignment, as well as eligibility for consideration for postgraduate education and overseas assignments. Certain information is promulgated to all active-duty JAGC officers in an annual publication known as the Directory of Navy Judge Advocates. The information is promulgated in the directory for general informational purposes within the JAGC, including provision of position (billet) availability information to officers contemplating rotation.

3) The Legal Assistance Module: Formerly embedded in the Court Martial Tracking and Information System (CMTIS), this module enables Legal Assistance to track the time attorneys and support staff spend on the legal services they provide. It also provides Legal Assistance the ability to conduct client conflict checks before providing their services. The remaining data in CMTIS will be archived to provide historical data and is not part of the scope.

Microsoft Azure Services, Dynamics 365 and PowerBI as Software as a Service (SaaS) would be utilized to replace the functionality found in the JAG Enterprise System (JES) currently hosted in the NCIS Data Center on Quantico, VA. The migration of JES will eliminate the need to maintain the physical and virtual server environment that JES currently operates on. Dynamics 365's strong out-of-the-box case management capabilities and client management capabilities gives JAG an opportunity to modernize business processes. JAG estimates that Dynamics 365 and PowerBI will be able to support 85% of the requirements with out-of-the box functionality and configuration alone. Minimal customization should be required. Replacing JES with a Dynamics 365 and PowerBI based solution will not only improve JAG's operational efficiency, insights, and agility, but will also provide an integrated, agile, and highly secure platform for future military justice capabilities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Judge Advocate General (JAG) Enterprise System	1.058	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2021 Plans: N/A					
FY 2022 Base Plans: N/A					
FY 2022 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	1.058	0.000	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3784 / *Judge Advocate General (JAG) Enterprise System*

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*	Project (Number/Name) 3784 / *Judge Advocate General (JAG) Enterprise System*	

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
Software Development	C/FFP	Microsoft : Washington, DC	0.000	1.058	Dec 2019	0.000		0.000		-		0.000	-	-	-
		Subtotal	0.000	1.058		0.000		0.000		-		0.000	-	-	N/A

Remarks

Migration of existing data center system to Software as a Service (SaaS) in a Navy approved cloud environment.

	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	1.058		0.000		0.000		-		0.000	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3784 / *Judge Advocate General (JAG) Enterprise System*

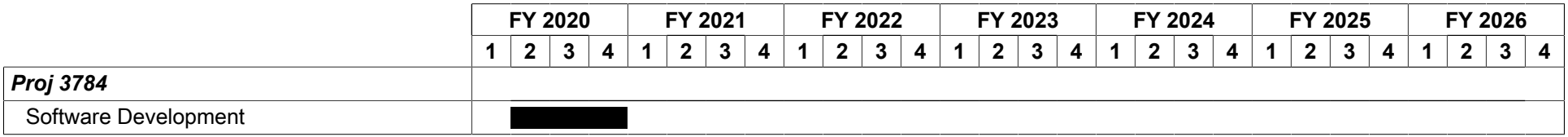


Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3784 / *Judge Advocate General (JAG) Enterprise System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3784				
Software Development	2	2020	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy												Date: May 2021
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				Project (Number/Name) 9406 / *Maintenance Data Warehouse*			
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**
9406: *Maintenance Data Warehouse*	78.699	22.486	36.181	31.466	-	31.466	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Maintenance Data Warehouse funds the Naval Aviation Enterprise (NAE) components, in coordination with Navy LOG-IT, of digital transformation which is a critical component of improving readiness; giving Navy users access to authoritative truth data and automating inefficient manual processes. It will be executed in a fully agile manner providing continuous fleet readiness improvements across the FYDP. The initial configuration will be supported with an agile Minimal Viable Product (MVP) as the foundation for continuous capability introduction. The Aviation Logistics Environment (ALE) will provide the seamless environment to support the integration of the other capabilities developed in Maintenance Data Warehouse.

Aviation Logistics Environment (ALE) provides a global logistics enterprise solution, delivering capabilities via a net-centric, shared data environment that supports shore-based, afloat, and expeditionary operations. ALE consists of three components; Ground Station, Aviation PLM, and Enterprise Service Bus (ESB). The Maintenance Engineering Ground Station for Aviation (MEGA) is the Naval Aviation Type/Model/Series (T/M/S)-agnostic ground station. MEGA is currently under development using Government off-the-Shelf (GOTS) software and PLM/ESB is configuring Commercial off-the-Shelf (COTS). The Aviation Product Lifecycle Management (Aviation PLM) capability will provide the digital thread of aviation logistics data for allowable and as-configured Repair Bill of Materials (R BOM) sustainment, technical bulletins, technical directives and engineering change proposals, and reliability centered maintenance and maintenance planning. The Enterprise Service Bus (ESB) capability will provide the digital backbone for data connections to and from authoritative data sources. ALE consolidates aging, near-end-of-life systems and applications and aligns Information Assurance (IA) and cybersecurity requirements.

Aviation Data Warehouse/Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE) program is the next generation data warehouse containing over 30 years of aircraft maintenance, flight, components, and usage data. Through the use of web-based, commercial off the shelf software for data load, analysis, query, and reporting tools, the user has the capabilities to effectively obtain readiness data in a near real-time environment, as well as providing historical data for long range planning, trend and records analysis, records reconstruction, and compliance with technical directives. DECKPLATE supports the mission of the warfighter who requires a single source of near real-time aviation data in which to base critical readiness decisions. DECKPLATE collects data from authoritative sources, such as the fleet maintenance systems, into a data warehouse. Because the warfighter only needs to access one database, the time consuming task of collecting various pieces of data from various sources will be reduced and ultimately eliminated. This also accomplishes a reduction in legacy systems mandated by Office of the Chief of Naval Operations. DECKPLATE manages total inventory for two major categories of assets, Aircraft (General Equipment) and Engine/Propulsion Systems/Modules (EPSMs) (Operating Materials & Supply). DECKPLATE is comprised of the transactional Aircraft Inventory and Readiness Reporting (DECK-AIRRS) and the Engine Transaction Reporting (DECK-ETR) subsystems which provide the complete lifecycle for aircraft and Engine/ Propulsion System/Modules (EPSMs). DECKPLATE has been identified as a level 1 financial feeder system due to the value of the aircraft and EPSM's managed in the system, and continues to respond to audit compliance and Cyber Security mandates. DECKPLATE is a core feeder system to numerous NAVAIR efforts.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

Condition Based Maintenance Plus (CBM+) solution is an initiative which provides Naval Aviation Enterprise with common enabling capabilities which deliver timely data-driven, decisional information to optimize aircraft availability and materiel readiness by incorporating health and usage leading indicators into the failure mode mitigation process, enabling the Warfighter to more efficiently meet mission requirements through automated analysis and decision making processes. The CBM+ initiative increases readiness through streamlined maintenance processes which provide the sustainment base with timely, actionable logistics/engineering data and integrated analytics not previously available, enabling engineers and acquisition professionals to support system improvements based on CBM+ acquired data and analytic results. CBM+ provides the enabling infrastructure and storage solutions within an Enterprise common environment needed to store and analyze weapon system sensor data to extend the life of current and new acquisition aircraft, realizing savings from reductions in field (organizational and intermediate) maintenance actions, reduced functional check flight hours, mishap mitigation, and reduced parts usage.

Vector supports the development of a common logistics analytical tool which provides a single view of the data to focus on aircraft readiness, maintenance, supply, cost, and man-hours. Vector provides naval aviation with a common view of approved key performance metrics and the capability to perform multi-system analysis of Ready for Tasking (RFT)/Ready Basic Aircraft (RBA) Gap drivers, 'Top-Down' aircraft systems analysis down to the component level. Vector identifies system performance trends early to mitigate future readiness and cost impacts to the fleet. This is critical for fleet understanding of readiness degraders and issue resolution.

Dynamic Scheduling provides insight and the ability to collaborate and affect schedules across all levels of maintenance and MRO systems. Advanced scheduling capabilities interfaced with current future MRO system to enable system assisted scheduling, optimization and opportunistic maintenance. Dynamic Scheduling will have access to demand across the NAE and will improve readiness across all levels of maintenance by allowing precise planning and execution.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Aviation Data Warehouse/Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE)	4.058	4.257	4.565	0.000	4.565
Articles:	-	-	-	-	-
FY 2021 Plans: Continue development of additional financial management requirements for the DECKPLATE financial feeder subsystems, Engine Management and Aircraft Inventory Readiness and Reporting System (AIRRS), required because of ongoing Financial Management and Comptroller (FM&C) audits; Continue development and enhancements as a result of Naval Aviation Maintenance Program policy changes and emerging fleet requirements. Complete Phase III development of Joint Strike Fighter Automated Logistics Information System (ALIS) data into the aviation data warehouse, incorporating additional data elements as they become available within the provided interfaces. Integration and capability enablement will continue with other key NAVAIR Defense Business Systems and initiatives, including Joint Technical Data Integration (JTDI), Configuration Management System (CMS), Aviation Logistics Environment (ALE), Naval Aviation Maintenance System (NAMS), and Aviation Logistics Environment (ALE) in support of Navy Digital Transformation Initiatives.					
FY 2022 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Continue development of additional financial management requirements for the DECKPLATE financial feeder subsystems, Engine Management and Aircraft Inventory Readiness and Reporting System (AIRRS), required because of annual Financial Management and Comptroller (FM&C) audits; Continue development and enhancements as a result of Naval Aviation Maintenance Program (NAMP) policy changes, and emerging fleet and cyber security requirements. Continue alignment with Digital Transformation Plan (DTP) modernization vectors and application rationalization; implement data extract procedures with the Naval Aviation Maintenance System (NAMS)/Agile Warfighter Analytics Readiness Environment (AWARE). Implement NAMS data ingest processes to maintain NAMP compliance during the roll-out of NAMS in support of DECKPLATE transactional systems AIRRS, Engine Management and Technical Directives Reporting System (TDRS); Integration and capability enablement will continue with other key NAVAIR Defense Business Systems and data analytics initiatives, including Joint Technical Data Integration (JTDI), Common FRACAS Tool (CFT), Configuration Management System (CMS), Aviation Logistics Environment (ALE) Product Life Cycle (PLM) Management, Naval Aviation Maintenance System in support of Navy Digital Transformation Initiatives. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 increase of $0.308M supports data connections and interface implementation with the Naval Aviation Maintenance System (NAMS)/ Agile Warfighter Analytics Readiness Environment (AWARE), and Product Life Cycle Management (PLM) software.					
Title: Aviation Logistics Environment (ALE) ***Articles:*** ***FY 2021 Plans:*** The Aviation Logistics Environment (ALE) program will continue to configure Product Lifecycle Management (PLM), ESB and Ground Station (GS) by developing automated workflows, integrating aviation platform content, and initiating legacy system transitions into the ALE products with six-month software releases. ALE will begin integration of multiple systems into the PLM, ESB and MEGA. ***FY 2022 Base Plans:*** The Aviation Logistics Environment (ALE) program will have two Limited Deployments to include: (1) System Migrations that retire legacy logistics IT systems and incorporate key capabilities for management of Engineering product data, end item configuration, deficiency reporting, standard ITEM viewing, and technical manuals (2) Integration with NAVAIR weapon systems, (3) Integration with other Navy modernization efforts to include Navy	16.015 -	28.765 -	24.533 -	0.000 -	24.533 -

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
MRO and Supply Chain Management. ALE will also complete Cloud Migration that migrates the entire AvPLM infrastructure into the Cloud. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decrease of $4.232M due to funds moving to Marine Corp Budget PE 0605013M.					
Title: Condition Based Maintenance Plus (CBM+)	1.048	0.210	0.141	0.000	0.141
Articles:	-	-	-	-	-
FY 2021 Plans: Integrate and transition CBM+ Standard Data Repository (SDR) and Analytic Tool Suite with Naval Aviation Data Warehouse (DECKPLATE) and Joint Technical Data Integration (JTDI) Defense Business Systems in test and production environments making all weapon system and supporting maintenance data remotely accessible and transportable across the Enterprise within a comprehensive Integrated Data Environment. Continued enablement of best of breed Business Intelligence and Advanced Analytic tools within the Enterprise Common CBM+ Environment, including GOTS / COTS / Open source products (Active Reporting Client (ARC), Mechanical Diagnostics Analysis Tool Navy (MDAN), Regime Recognition, Zoom Data, Anaconda (Python / R), Zeppelin, and other evolving analytic tools) within the common storage and analytics environment. Enhancements to the environment's best of breed analytical tools and will continue with focus on serial number tracking improvements for interfacing transactional systems of record. Continue appropriate migrations of CBM+ applications to containerized architecture to improve scalability of analytic sandbox environments supporting Engineering and Data Science community use cases to access data and integrated analytics at scale. ***FY 2022 Base Plans:*** Complete development/modernization efforts. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:***					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
FY22 decrease of $0.069M is due to completion of development/modernization efforts and shifting to sustainment efforts for CBM+ analytic capabilities.					
Title: Dynamic Scheduling	0.726	1.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2021 Plans: Begin working on the maintenance task decomposition baseline required for platform integration and develop optimization algorithm by Type Model Series (TMS). ***FY 2022 Base Plans:*** N/A ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 decrease due to the scheduler capability being integrated into Aviation Logistics Environment (ALE) Maintenance Engineering Ground Station for Aviation (MEGA).					
Title: Vector	0.639	1.949	2.227	0.000	2.227
Articles:	-	-	-	-	-
FY 2021 Plans: Continue development of additional enhancements to Vector Analytics as a result of emerging Fleet and Naval Aviation Enterprise customer requirements. New capabilities include implementation of DEPOT Event Maintenance Status Analysis and Metric Reports for Engines and Engine Modules to identifying Aircraft Readiness Impact Degraders; Implement data analytic capabilities for Aircraft DEPOTS. Integration and analytics capability enablement will expand into the Secure Internet Protocol Router Network environment and will continue with other key NAVAIR Defense Business Systems and initiatives. ***FY 2022 Base Plans:*** Begin migration to DoD Cloud Native Services and Integration with common data environments. Begin analysis for interface requirements to Naval Aviation Maintenance System/Agile Warfighter Analytics Readiness Environment/Product Lifecycle Management/Enterprise Service Bus. Respond to emerging Fleet and Naval Aviation Enterprise customer requirements. New capabilities include implementation of Aviation Support Equipment Analysis and Metric Reports to support identifying Aircraft Readiness Impact Degraders, Phase III					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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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
Integration and Consolidation of Commercial Off-the-Shelf Business Intelligence Integration for Aircraft Status Dashboard and Aircraft Maintenance Daily Status Dashboard, begin analysis for transition changes for Joint Strike Fighter Aviation Logistics Information System to Operational Data Integrated Network. Continue Air Launched Weapons Requirements Analysis Module on Secure Internet Protocol Router Network. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 increase of $0.278M to meet DoN LOG IT consolidation and Digital Transformation initiatives, Cloud Native Services migration, increased demand for new Aircraft Readiness and Reliability analytic capabilities through Commercial Off-the-Shelf Business Intelligence Integration, and connectivity to Product Lifecycle Management/Enterprise Service Bus.					
Accomplishments/Planned Programs Subtotals	22.486	36.181	31.466	0.000	31.466

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• OPN/4268/DECKPLATE: *Other Aviation Support Equipment*	2.221	2.238	2.196	-	2.196	-	-	-	-	-	-
• OPN/4268/CBM: *Other Aviation Support Equipment*	0.286	0.288	0.285	-	0.285	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

The management approach includes the Logistics IT Portfolio Management Office residing in NAVAIR as part of Program Executive Office for Aviation Common Systems and Commercial Services (PEO(CS)).

Aviation Data Warehouse/Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE) -
Development services will be performed under a competitively awarded contract. The task order contains a matrix of tasks and required levels of performance. Follow on contracts will utilize the same competitive system. The services provided under the contract support acquisition will not encompass tasks inherently Governmental in nature. The Statement of Work includes a matrix that establishes the minimum acceptable performance standards.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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Condition Based Maintenance Plus (CBM+) - Development will be provided using competitively awarded contracts coordinated via NAVAIR's Aviation Logistics Environment (ALE) Program Management and supporting Contract Business Office, and will contain a matrix of tasks and required levels of performance. Follow on Contracts will utilize the same competitive system. The Services provided under the contract support acquisition will not encompass tasks inherently Governmental in nature, and Statements of Work will include a matrix that establishes the minimum acceptable performance standards.

Aviation Logistics Environment (ALE)- Development services will be awarded using a competitively awarded contract that will contain a matrix of tasks and required levels of performance. Follow on contracts will also follow the same competitive system. The Services provided under the contract support acquisitions will not encompass tasks inherently Governmental in nature and the Statements of Work will include a matrix that establishes the minimum acceptable performance standards.

Vector Software - Development services will be performed under a competitively awarded Cyber Security (CS) Contract. Follow on Contracts will utilize the same competitive system. The Services provided under the contract support acquisitions will not encompass tasks inherently governmental in nature. The Statements of Work will include a matrix that establishes the minimum acceptable performance standards.

Dynamic Scheduling - Development services will be awarded using a competitively awarded contract that will contain a matrix of tasks and required levels of performance. Follow on contracts will also follow the same competitive system. The Services provided under the contract support acquisitions will not encompass tasks inherently Governmental in nature and the Statements of Work will include a matrix that establishes the minimum acceptable performance standards.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
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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
Prior year Prod Def no longer funded in the FYDP	Various	Various : Various	16.255	0.000		0.000		0.000		-		0.000	-	-	-
Development for Aviation Logistics Environment (ALE)	Various	Various : Various	17.224	12.614	Feb 2020	12.902	Feb 2021	15.157	Feb 2022	-		15.157	-	-	-
Development for Decision Knowledge Programming for Logistics Analysis and Technical Evalutaion (DECKPLATE)	C/CPFF	Spalding : Lexington Park, MD	7.619	2.950	Dec 2019	1.533	Dec 2020	2.960	Dec 2021	-		2.960	-	-	-
Development for Condition Based Maintenance Plus (CBM+)	C/CPFF	KBR : Patuxent River, MD	21.206	0.000		0.168	Dec 2020	0.000		-		0.000	-	-	-
Development for Vector	C/CPFF	KBR : Patuxent River, MD	0.000	0.332	Dec 2019	1.219	Nov 2020	1.524	Dec 2021	-		1.524	-	-	-
Development for Vector	C/CPFF	Spalding : Lexington Park, MD	0.000	0.000		0.000		0.150	Dec 2021	-		0.150	-	-	-
Development for Dynamic Scheduling	Various	Various : Various	0.000	0.528	Jan 2020	0.795	Jan 2021	0.000		-		0.000	-	-	-
Development for Decision Knowledge Programming for Logistics Analysis and Technical Evalutaion (DECKPLATE)	C/CPFF	KBR : Patuxent River, MD	0.276	0.124	Dec 2019	0.750	Dec 2020	0.342	Dec 2021	-		0.342	-	-	-
Development for Condition Based Maintenance Plus (CBM+)	C/CPFF	Spalding : Lexington Park, MD	1.125	0.758	Dec 2019	0.000		0.000		-		0.000	-	-	-
Development for Aviation Logistics Environment (ALE)	C/CPFF	KBR : Patuxent River, MD	0.593	0.000		4.008	Jan 2021	2.090	Jan 2022	-		2.090	-	-	-
Development for Vector	C/FFP	Cyber Analytics : Patuxent River, MD	0.000	0.146	Feb 2020	0.510	Dec 2020	0.225	Feb 2022	-		0.225	-	-	-
Development for Decision Knowledge Programming	C/FFP	TBD : TBD	0.000	0.000		1.074	Oct 2020	0.000		-		0.000	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
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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
for Logistics Analysis and Technical Evalutaion (DECKPLATE)															
Development for Aviation Logistics Environment (ALE) Ground Station	C/CPFF	Redstone : Huntsville, AL	0.000	0.000		6.690	Jun 2021	2.500	Jun 2022	-		2.500	-	-	-
		Subtotal	64.298	17.452		29.649		24.948		-		24.948	-	-	N/A

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 Support for DECKPLATE	WR	NAWCAD : Patuxent River, MD	7.263	0.984	Oct 2019	0.750	Oct 2020	1.263	Oct 2021	-		1.263	-	-	-
Prior year Prod Def no longer funded in the FYDP	Various	Various : Various	0.628	0.000		0.000		0.000		-		0.000	-	-	-
Program Management Support for CBM+	WR	NAWCAD : Patuxent River, MD	3.810	0.290	Oct 2019	0.042	Oct 2020	0.141	Oct 2021	-		0.141	-	-	-
Program Management Support for Aviation Logistics Environment (ALE)	WR	NAWCAD : Patuxent River, MD	2.700	3.401	Oct 2019	1.000	Oct 2020	0.854	Oct 2021	-		0.854	-	-	-
Program Management Support for Vector	WR	NAWCAD : Patuxent River, MD	0.000	0.068	Oct 2019	0.098	Oct 2020	0.203	Oct 2021	-		0.203	-	-	-
Program Management Support for Vector	C/CPFF	KBR : Patuxent River, MD	0.000	0.093	Dec 2019	0.122	Nov 2020	0.125	Dec 2021	-		0.125	-	-	-
Program Management Support for Dynamic Scheduling	WR	NAWCAD : Patuxent River, MD	0.000	0.198	Oct 2019	0.205	Oct 2020	0.000		-		0.000	-	-	-
Program Management Support for DECKPLATE	C/CPFF	KBR : Patuxent River, MD	0.000	0.000		0.150	Nov 2020	0.000		-		0.000	-	-	-
Program Management Support for Aviation	WR	NAWCWD : China Lake, CA	0.000	0.000		0.145	Oct 2020	0.000		-		0.000	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

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
Logistics Environment (ALE)															
Program Management Support - TRAVEL Aviation Logistics Environment (ALE)	WR	NAVAIR HQ : Patuxent River, MD	0.000	0.000		0.030	Oct 2020	0.040	Oct 2021	-		0.040	-	-	-
Program Management Support for Aviation Logistics Environment (ALE)	C/CPFF	KBR : Patuxent River, MD	0.000	0.000		2.290	Feb 2021	1.999	Feb 2022	-		1.999	-	-	-
Program Management Support for Aviation Logistics Environment (ALE)	C/CPFF	Booz Allen Hamilton : Patuxent River, MD	0.000	0.000		1.700	Feb 2021	1.593	Feb 2022	-		1.593	-	-	-
Program Management Support for Aviation Logistics Environment (ALE)	WR	Fleet Readiness Center Mid Atlantic : Patuxent River, MD	0.000	0.000		0.000		0.300	Oct 2021	-		0.300	-	-	-
		Subtotal	14.401	5.034		6.532		6.518		-		6.518	-	-	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	78.699	22.486		36.181		31.466		-		31.466	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

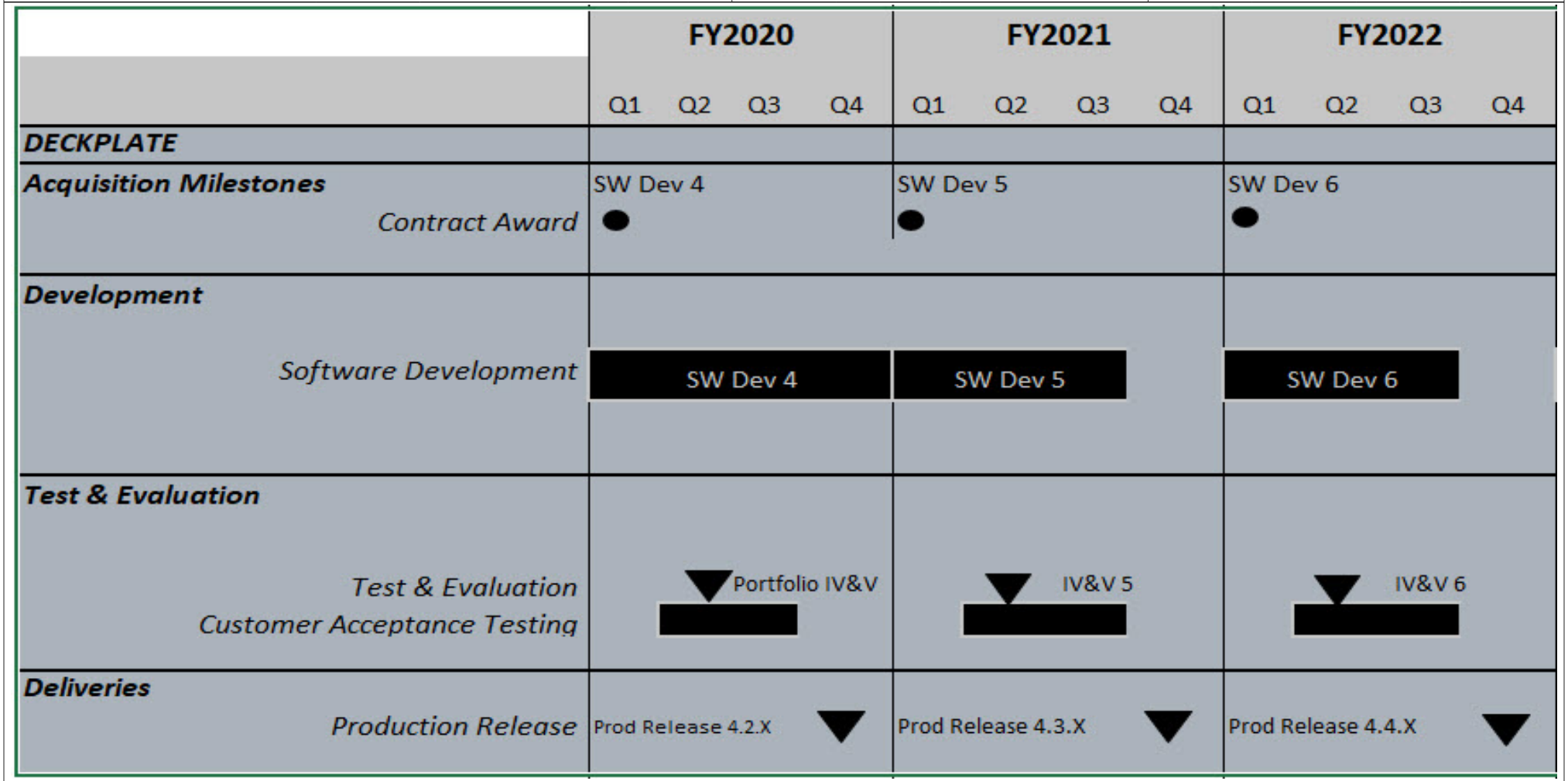

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

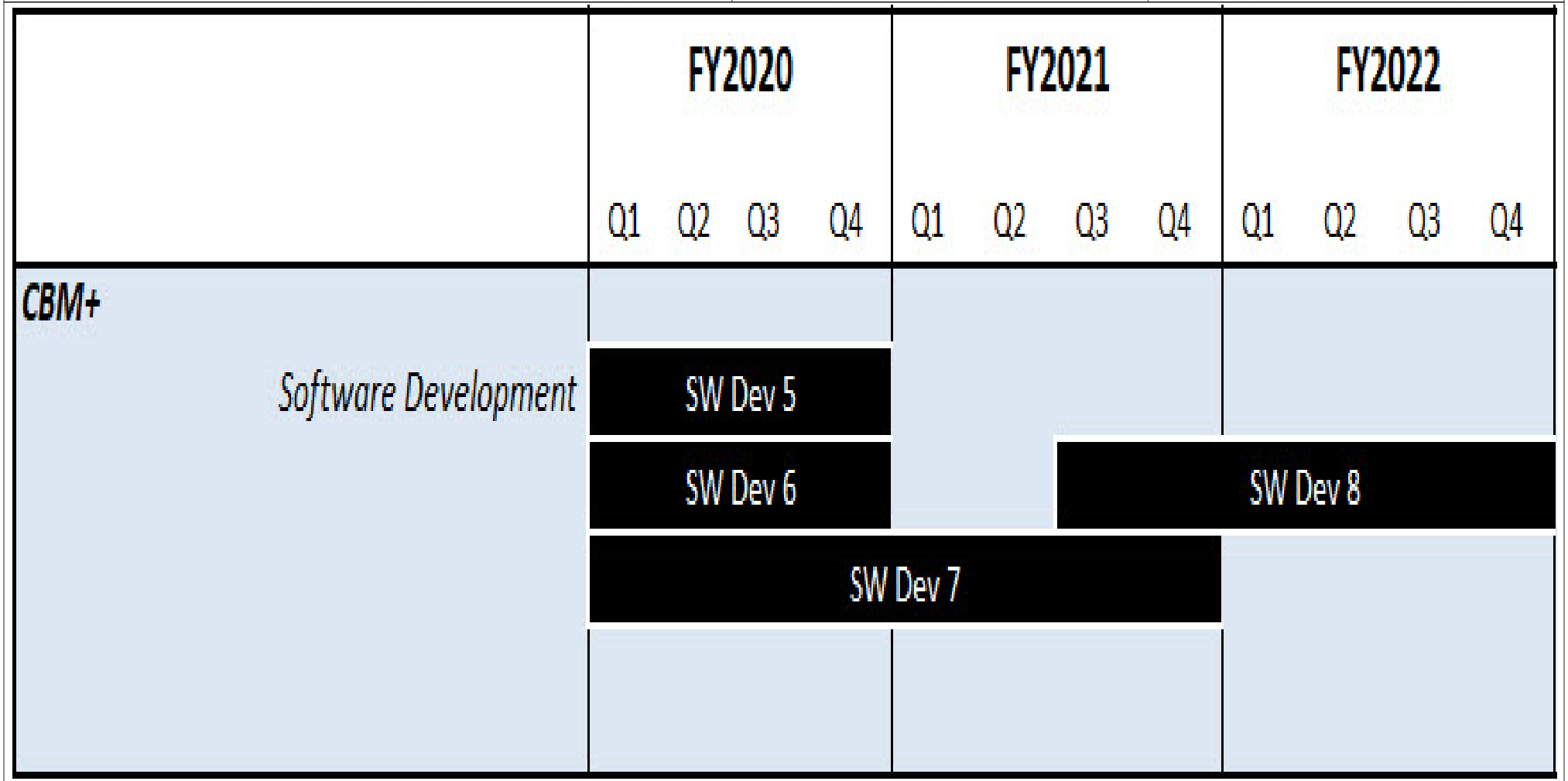

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

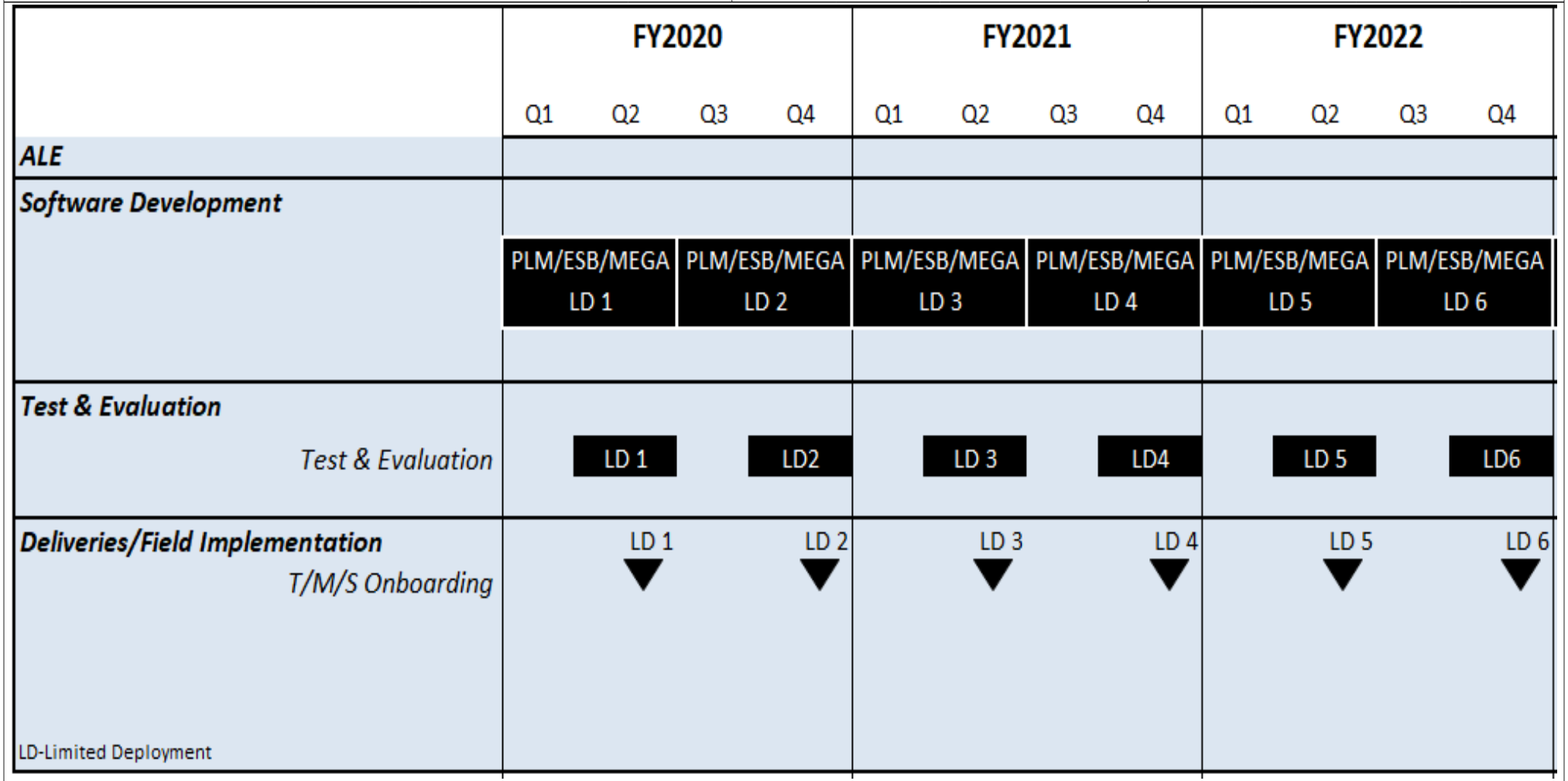

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

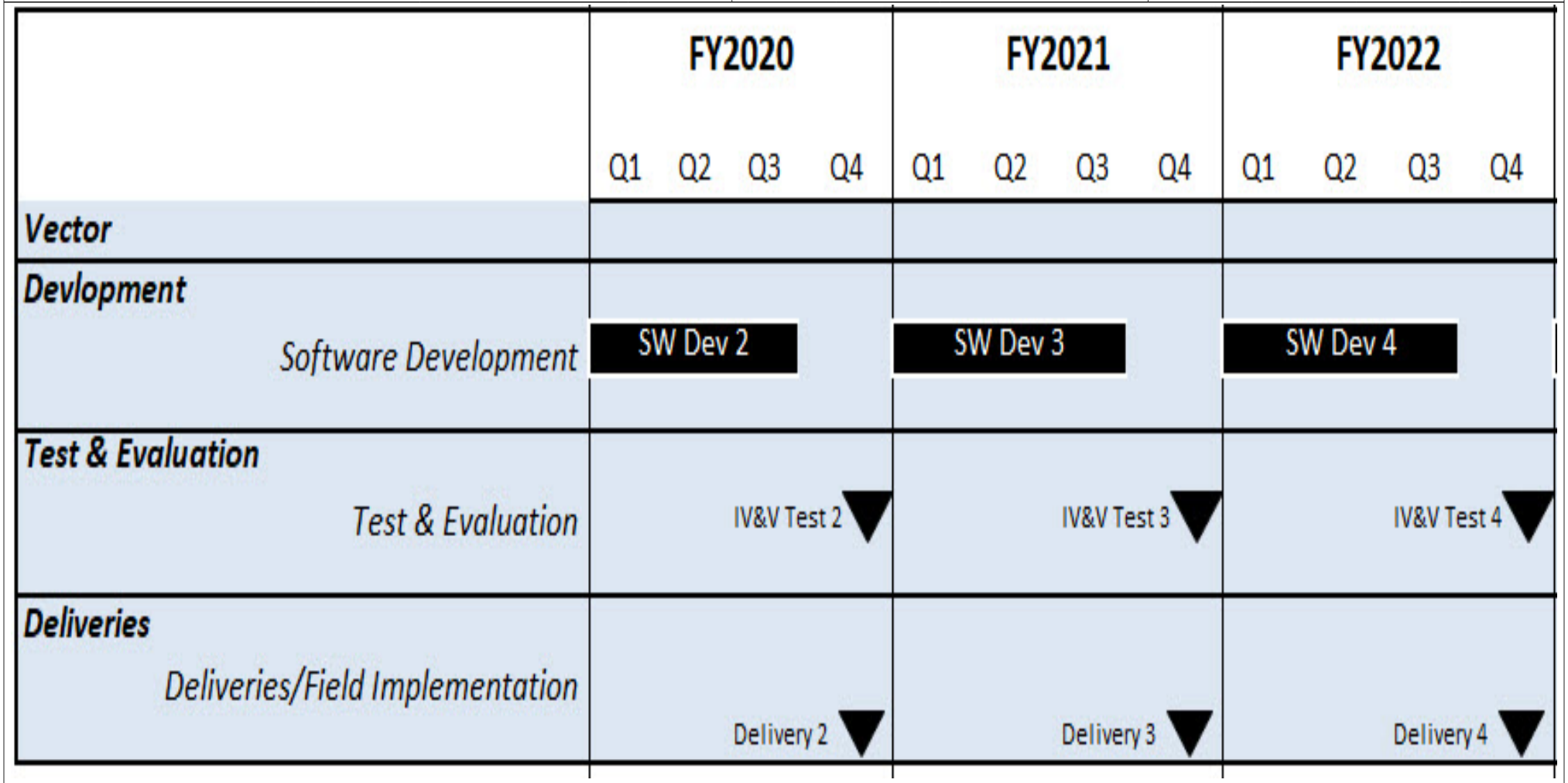

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

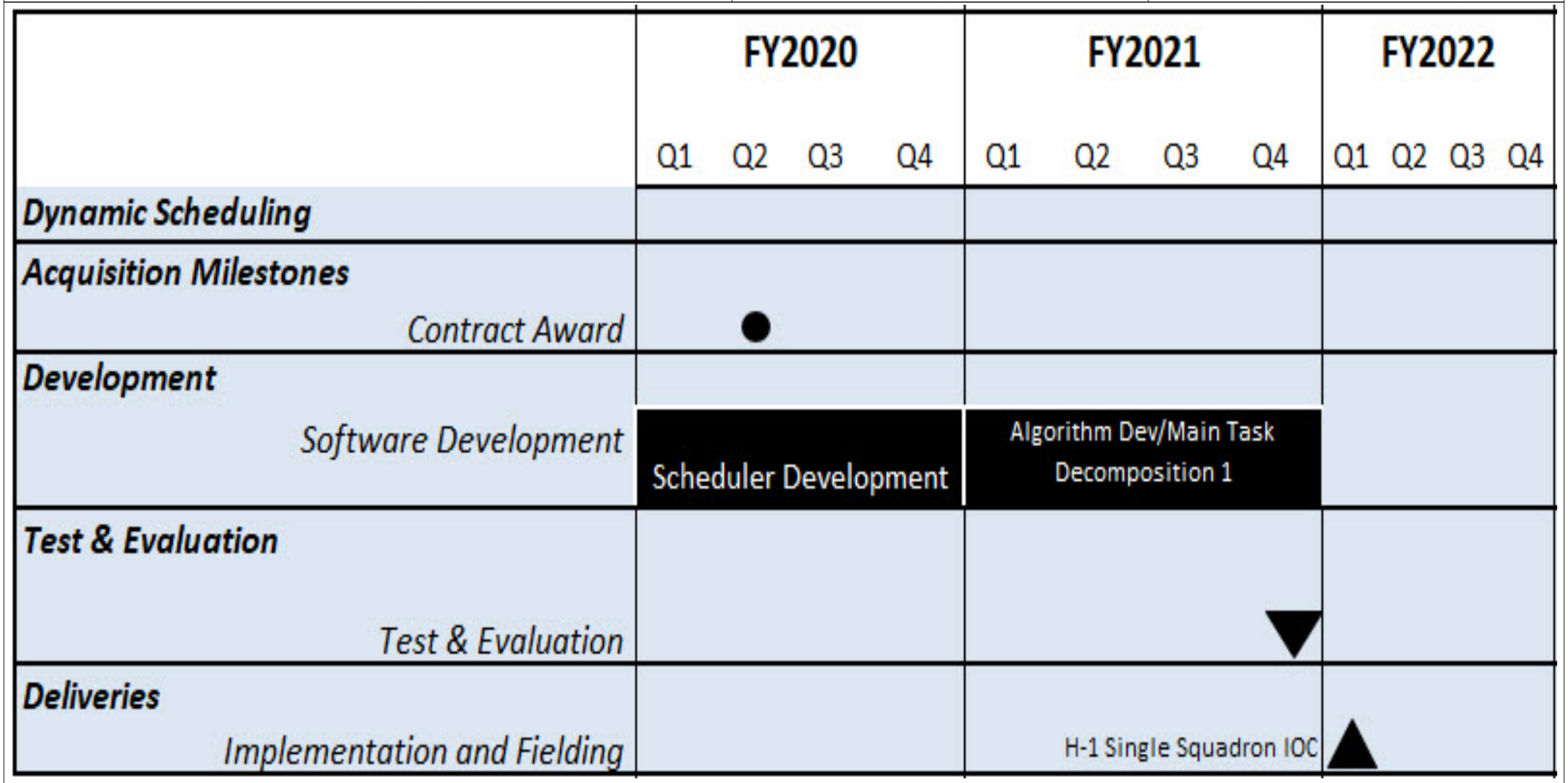

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
DECKPLATE IT EXXCOMM Portfolio Consolidation				
Systems Development: Software Development: DECKPLATE Software Development 4	1	2020	4	2020
Systems Development: Software Development: Contract Award 4	1	2020	1	2020
Systems Development: Software Development: FIAR & F35 IER Requirements and Design 4	1	2020	2	2020
Systems Development: Software Development: NAMS/Integrated Data Environment requirements, planning, data mapping 4	1	2020	4	2020
Systems Development: Software Development: Business Intelligence (BI)/Analytics/ Vision 2020 Initiatives Requirements and Design 4	1	2020	4	2020
Systems Development: Software Development: DECK-ALS/CMS Requirements and Design 4	1	2020	3	2020
Systems Development: Software Development: FIAR Software Development Integration, Testing and Implementation 4	2	2020	4	2020
Systems Development: Software Development: BI/Analytics/Vision 2020: (IT Labor/ HW/ Hosting/Licensing) 4	2	2020	4	2020
Systems Development: Software Development: F35 IER 4	1	2020	3	2020
Systems Development: Software Development: DECK-ALS/CMS integration 4	1	2020	3	2020
Systems Development: Software Development: Contract Award 5	1	2021	1	2021
Systems Development: Software Development: Requirements and Design 5	1	2021	1	2021
Systems Development: Software Development: Software Development and Design: (IT Labor/HW/ Hosting/Licensing) 5	1	2021	3	2021
Systems Development: Software Development: Audit Compliance/JSF Phase III Software Development 5	1	2021	3	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Systems Development: Software Development: Integration and Capability Enablement5	1	2021	3	2021
Systems Development: Software Development: Contract Award 6	1	2022	1	2022
Systems Development: Software Development: Requirements and Design 6	1	2022	3	2022
Systems Development: Software Development: Software Development and Design: (IT Labor/HW/ Hosting/Licensing) 6	1	2022	3	2022
Test & Evaluation: DECKPLATE IV&V Testing	2	2020	2	2020
Test & Evaluation: DECKPLATE Customer Acceptance Testing	2	2020	3	2020
Test & Evaluation: DECKPLATE IV&V Testing 5	2	2021	2	2021
Test & Evaluation: DECKPLATE Customer Acceptance Testing 5	2	2021	3	2021
Test & Evaluation: DECKPLATE IV&V Testing 6	2	2022	2	2022
Test & Evaluation: DECKPLATE Customer Acceptance Testing 6	2	2022	3	2022
Deliveries: DECKPLATE Production Release, Delivery 4.2.X	4	2020	4	2020
Deliveries: DECKPLATE Production Release Delivery 4.3.X	4	2021	4	2021
Deliveries: DECKPLATE Production Release Delivery 4.4.X	4	2022	4	2022
Condition Based Maintenance Plus (CBM+)				
Systems Development: Software Development: CBM+ Regime Recognition Production Capability 5	1	2020	4	2020
Systems Development: Software Development: Contract Award-CBM+ Component Tracking Integration 6	1	2020	1	2020
Systems Development: Software Development: Requirements and Design Component Tracking 6	1	2020	2	2020
Systems Development: Software Development: CBM+ Component Tracking Integration 6	2	2020	3	2020
Systems Development: Software Development: Contract Award-CBM+ Regime Recognition (H-1)	1	2020	1	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Systems Development: Software Development: Requirements and Design Regime Recognition (H-1)	1	2020	2	2020
Systems Development: Software Development: CBM+ Regime Recognition Tracking Integration (H-1)	2	2020	3	2020
Systems Development: Software Development: CBM+ Regime Recognition Production (H-1)	3	2020	4	2020
Systems Development: Software Development: Contract Award-CBM+ Distributed File Storage and Analytics Enhancements and Data Warehouse Integration	1	2020	1	2020
Systems Development: Software Development: Schedule DetailRequirements and Design Distributed File Storage and Analytics Enhancements and Data Warehouse	1	2020	2	2020
Systems Development: Software Development: CBM+ Distributed File Storage and Analytics Enhancements and Data Warehouse Integration	2	2020	3	2020
Systems Development: Software Development: CBM+ Distributed File Storage and Analytics Enhancements and Data Warehouse Production	3	2020	4	2020
Systems Development: Software Development: CBM+ Requirements Development 7	1	2020	3	2021
Systems Development: Software Development: Contract Award-CBM+ Component Tracking Integration 7	3	2020	3	2020
Systems Development: Software Development: CBM+ Component Tracking Integration 7	4	2020	4	2020
Systems Development: Software Development: Contract Award-CBM+ Regime Recognition Production Capability 7	4	2020	4	2021
Systems Development: Software Development: CBM+ Requirements Development 8	3	2021	3	2022
Systems Development: Software Development: Contract Award-CBM+ Component Tracking Integration 8	3	2021	3	2021
Systems Development: Software Development: CBM+ Component Tracking Integration 8	4	2021	4	2021
Systems Development: Software Development: Contract Award-CBM+ Regime Recognition Production Capability 8	4	2021	4	2022

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Aviation Logistics Environment (ALE)				
Software Development: PLM Solution/ESB/MEGA Limited Deployment 1	1	2020	2	2020
Software Development: PLM Solution/ESB/MEGA Limited Deployment 2	3	2020	4	2020
Software Development: PLM Solution/ESB/MEGA Limited Deployment 3	1	2021	2	2021
Software Development: PLM Solution/ESB/MEGA Limited Deployment 4	3	2021	4	2021
Software Development: PLM Solution/ESB/MEGA Limited Deployment 5	1	2022	2	2022
Software Development: PLM Solution/ESB/MEGA Limited Deployment 6	3	2022	4	2022
Test and Evaluation: LD 1 Test and Evaluation	2	2020	2	2020
Test and Evaluation: LD 2 Test and Evaluation	4	2020	4	2020
Test and Evaluation: LD 3 Test and Evaluation	2	2021	2	2021
Test and Evaluation: LD 4 Test and Evaluation	4	2021	4	2021
Test and Evaluation: LD 5 Test and Evaluation	2	2022	2	2022
Test and Evaluation: LD 6 Test and Evaluation	4	2022	4	2022
Implementation: Implementation: T/M/S Onboarding LD 1	2	2020	2	2020
Implementation: Implementation: T/M/S Onboarding LD 2	4	2020	4	2020
Implementation: Implementation: T/M/S Onboarding LD 3	2	2021	2	2021
Implementation: Implementation: T/M/S Onboarding LD 4	4	2021	4	2021
Implementation: Implementation: T/M/S Onboarding LD 5	2	2022	2	2022
Implementation: Implementation: T/M/S Onboarding LD 6	4	2022	4	2022
Vector				
System Development: Software Development 2	1	2020	3	2020
System Development: Software Development 3	1	2021	3	2021
System Development: Software Development 4	1	2022	3	2022
Test and Evaluation: I V&V Testing 2	4	2020	4	2020
Test and Evaluation: I V&V Testing 3	4	2021	4	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test and Evaluation: I V&V Testing 4	4	2022	4	2022
Deliveries: Software Capability Delivery 2 (RAMP Phase I, LOGCELL Integration, BI Integration Phase I)	4	2020	4	2020
Deliveries: Software Capability Delivery 3 (RAMP Phase II, BI Integration Phase II, DEPOT Engines, Schedule Maintenance Planning, Weapons, Training Readiness Analytics Initial Deployment)	4	2021	4	2021
Deliveries: Software Capability Delivery 4 (ASD Interface, Daily Status, Support Equipment Analytics Initial Deployement)	4	2022	4	2022
Dynamic Scheduling				
System Development: System Development: Contract Award Dynamic Scheduling	2	2020	2	2020
System Development: System Development: Concept of Operations (CONOPS)	2	2020	2	2020
System Development: System Development: Functional Reqwuirements Document (FRD)	2	2020	2	2020
System Development: System Development: Scheduler Development	1	2020	4	2020
System Development: System Development: Algorithm Development/Maint Task Decomposition 1	1	2021	3	2021
Test and Evaluation: Test and Evaluation: Dynamic Scheduling Testing	4	2021	4	2021
Implementation and Fielding: Implementation and Fielding: Initial Operational Capability (IOC) Single Squadron H-1	1	2022	1	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				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*	23.644	7.718	10.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

C599 - There is a misspelling in the Accomplishment name. Solutions vice Soutions.

A. Mission Description and Budget Item Justification

CONDITION BASED MAINTENANCE PLUS (CBM+):
The CBM+ solution is an initiative which provides Naval Aviation Enterprise with common enabling capabilities which deliver timely data-driven decisional information to optimize aircraft availability and materiel readiness by incorporating health and usage leading indicators into the failure mode mitigation process, enabling the Warfighter to more efficiently meet mission requirements through automated analysis and decision making processes. The CBM+ Initiative increases readiness through streamlined maintenance processes which provide actionable logistics/engineering data and integrated analytics not previously available, enabling engineers and acquisition professionals to support system improvements based on CBM+ acquired data and analytic results. CBM+ provides the enabling infrastructure and storage solutions within an Enterprise common environment needed to store and analyze weapon system sensor data to extend the life of current and new acquisition aircraft, realizing savings from reductions in field (organizational and intermediate) maintenance actions, reduced functional check flight hours, mishap mitigation, and reduced parts usage.

MODEL BASED PRODUCT SUPPORT (MBPS) - Formerly known as Product Lifecycle Management (PLM):
This program includes funding to support Information Technology (IT) Rationalization and Product Lifecycle Management migration efforts to modernize NAVSEA's Technical Data, Configuration and Logistics IT systems. This will enable advanced warfighter readiness capabilities in accordance with OPNAV N4's Digital Transformation Vision. This IT solution will be used by over 40,000 civilian and military personnel, impacting a yearly $6.5B investment in product sustainment. The absence of a centrally sponsored MBPS with a commonly defined and enforced system and data architecture has resulted in a proliferation of unique non-standardized, non-integrated, stove-piped IT solutions across the Navy, all supporting singular logistics functions and none able to influence warfighter readiness holistically. To enable enterprise readiness analytics, this effort will eliminate stove-piped legacy logistics IT applications and in place field an NAVSEA MBPS capability that enables programs to acquire and manage product support data/information within a single, structured, authoritative product data environment linking material readiness outcomes to the Program's core systems engineering processes. The key enabling construct of the MBPS is a digital thread/digital twin capability which provides a formal framework for controlled interplay of authoritative technical and as-built data with the ability to access, integrate, transform and analyze data throughout the product lifecycle into actionable information. Moreover as these capabilities mature, the cost of readiness becomes significantly more affordable and combat logistics operations become significantly more effective. As the Navy realizes these outcomes, Enterprise Digital Logistics IT services effectively become combat multipliers. The most significant benefit being that they maximize the effectiveness of our warfighters as we deliver them right data, at the right time, so they can continuously make the right decision faster than the enemy. Any decrease in funding will negatively impact MBPS schedule.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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Please note that, since the FY20 President's Budget, the name of this program has changed from Product Lifecycle Management (PLM) to Model Based Product Support (MBPS). The change was made as MBPS is a more accurate reflection of the scope of work involved in this program, as PLM is only a portion of the larger MBPS undertaking.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021
Congressional Add: NAVSEA readiness and logistics information technology digital transformation pla ***FY 2020 Accomplishments:*** N/A ***FY 2021 Plans:*** N/A	7.718	0.000
Congressional Add: Cyber Innovations in Classified Environments ***FY 2020 Accomplishments:*** N/A ***FY 2021 Plans:*** This project will prototype innovative enhancements to existing commercial off-the-shelf (COTS) cross-domain capabilities that will improve the cyber resiliency of Naval Aviation, US Navy, and DoD weapon systems. Through this project, the NAWCAD Cyber Warfare Department (CWD) will work to ensure that warfighting systems and their directly corresponding support systems can maintain operational readiness and are survivable and mission capable in the face of modern cyber warfare threats. This project will address CWD-identified shortcomings related to multi-level security, real-time bi-directional communications from sensors/payloads and data sources to command and control (C2) exploitations across various security domains. In the end, this project will advance novel concepts and emerging technologies to better ensure Navy and DOD systems can maintain operational readiness and survive threats to the systems, platforms, and directly corresponding support systems in cyber-contested warfighting environments.	0.000	3.000
Congressional Add: Cyber Soutions for Aviation Systems and Facilities ***FY 2020 Accomplishments:*** N/A ***FY 2021 Plans:*** This project will develop and mature defensive cyber technologies, enhance cyber test tools, and perform red team analysis and defensive cyber operations supporting naval aviation platforms. Through the execution of this project, naval aviation cyber readiness will be ultimately improved and better assured. Risks to mission, readiness and safety will be considered across the portfolio and testing gaps critical to identifying those risks will be closed. More specifically, C599 covers: augmentation and maturation of laboratory capabilities, environments and customized toolsets across multiple NAVAIR sites and facilities to conduct cyber security Research, Development, Test and Evaluation (RDT&E) for NAVAIR programs; development aviation weapon systems customized tools, methodologies, and procedures identified from Cyber Risk Assessments, Cyber Table Tops, test and evaluation capability gaps and emergent threats; increased program and Fleet support	0.000	7.000

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9999 / *Congressional Adds*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021
capability for penetration testing, hands on adversarial assessments, and engineering investigations; enhanced intelligence collaboration supporting defensive and offensive cyber warfare.		
Congressional Adds Subtotals	7.718	10.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

CONDITION BASED MAINTENANCE PLUS:
Development services will be provided using a competitively awarded contract coordinated via NAVAIR's Aviation Logistics Environment (ALE) Program Management and supporting Contract Business Office, and will contain a matrix of tasks and required levels of performance. Follow on Contracts will utilize the same competitive system. The Services provided under the contract support acquisition will not encompass tasks inherently Governmental in nature, and Statements of Work will include a matrix that establishes the minimum acceptable performance standards.

MODEL BASED PRODUCT SUPPORT (MBPS):
MBPS development services were solicited in FY 19 using competitively awarded contracts and Government programmatic and technical subject matter expertise to rapidly prototype core product data management, readiness at cost decision modeling and timely and relevant bi-directional distribution of serialized readiness data analytics capabilities. In support of OPNAV N41 digital transformation effort, MBPS program seeks to rationalize/replace 11 core configuration, provisioning, readiness and technical data systems and provide an integrated modern Commercial-Off-The-Shelf cloud based Product Life-Cycle Management capability for maritime forces in FY21. Additionally, ePLM efforts supported by MARCOR and NSWC PHD will be rationalized under MBPS in FY21. Plans for rationalization of additional IT applications in the out-years is currently in development by OPNAV N41. Follow on contracts to support future rationalization/integration efforts will utilize the same competitive system and leverage previous prototyping efforts and lessons learned to the maximum extent possible. Contractual services will not encompass tasks inherently Governmental in nature and will include a matrix that establishes the minimum acceptable performance standards.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
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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
Technology Refreshment (PLM)	Various	Various : Various	4.150	0.000		0.000		0.000		-		0.000	-	-	-
Cyber Innovations	Various	Various : Various	0.000	0.000		3.000	Jun 2021	0.000		-		0.000	-	-	-
Cyber Solutions	Various	Various : Various	0.000	0.000		1.489	Mar 2021	0.000		-		0.000	-	-	-
		Subtotal	4.150	0.000		4.489		0.000		-		0.000	-	-	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
HW/SW (CBM+)	C/FFP	Washington HQ Services : Washington, DC	6.061	3.700	Sep 2020	0.000		0.000		-		0.000	-	-	-
Software Development for (CBM+)	C/CPFF	Wyle : Patuxent River, MD	1.700	0.000	Sep 2020	0.000		0.000		-		0.000	-	-	-
Systems Engineering (PLM)	WR	NSWC : Philadelphia, PA	0.780	0.200	Sep 2020	0.000		0.000		-		0.000	-	-	-
Systems Engineering (PLM)	WR	NSWC : Crane, ID	1.264	0.400	Sep 2020	0.000		0.000		-		0.000	-	-	-
Systems Engineering (PLM)	WR	NSWC : Port Hueneme, CA	2.244	1.700	Sep 2020	0.000		0.000		-		0.000	-	-	-
Technical Support (PLM)	Various	Various : Various	2.865	0.000	Sep 2020	0.000		0.000		-		0.000	-	-	-
Systems Engineering (PLM)	WR	NSWC : Carderock, MD	0.880	0.300	Sep 2020	0.000		0.000		-		0.000	-	-	-
Systems Engineering (PLM)	WR	NSWC : Dahlgren, VA	0.530	0.200	Sep 2020	0.000		0.000		-		0.000	-	-	-
Systems Engineering (PLM)	WR	NAVSEALOGCEN : Mechanicsburg, PA	3.150	1.218	Sep 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	19.474	7.718		0.000		0.000		-		0.000	-	-	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
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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 Support for (CBM+)	WR	NAWCAD : Patuxent River, MD	0.020	0.000		0.000		0.000		-		0.000	-	-	-
Cyber Solutions Mgmt Support	WR	NAWCAD : Patuxent River, MD	0.000	0.000		4.736	Mar 2021	0.000		-		0.000	-	-	-
Cyber Solutions Mgmt Support	WR	NAWCWD : China Lake, CA	0.000	0.000		0.450	Mar 2021	0.000		-		0.000	-	-	-
Cyber Solutions Mgmt Support	WR	NAWCWD : Point Mugu, CA	0.000	0.000		0.325	Mar 2021	0.000		-		0.000	-	-	-
		Subtotal	0.020	0.000		5.511		0.000		-		0.000	-	-	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	23.644	7.718		10.000		0.000		-		0.000	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9999 / *Congressional Adds*

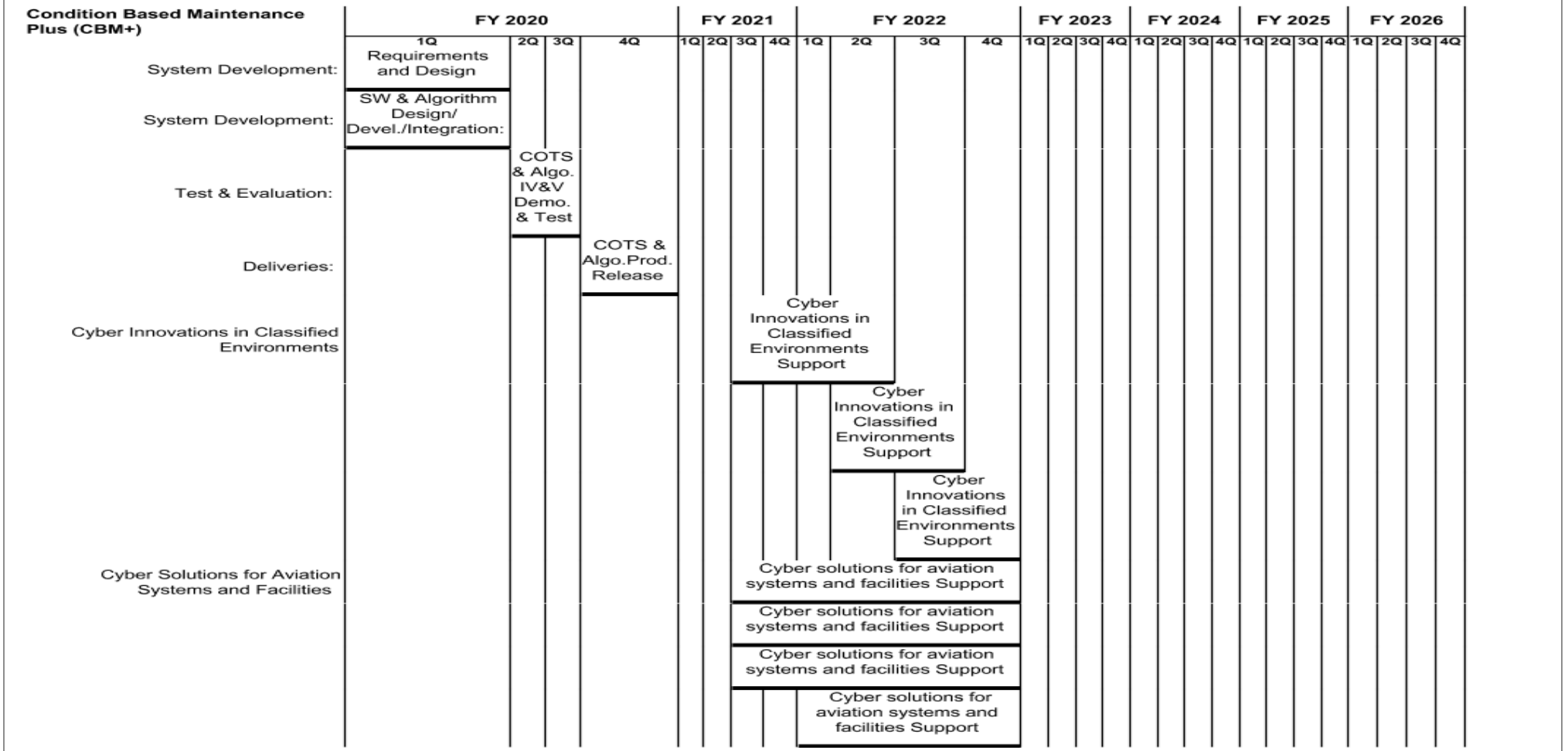

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
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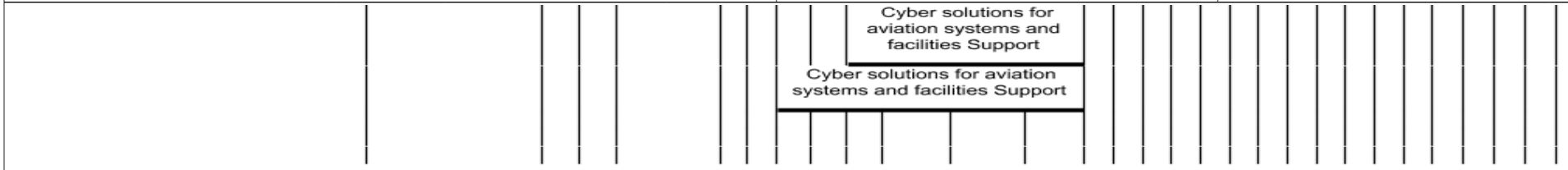

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Condition Based Maintenance Plus (CBM+)				
System Development:: Requirements and Design	1	2020	1	2020
System Development:: Software and Algorithm Design/ Development/Integration:	1	2020	1	2020
Test & Evaluation:: CBM+ COTS and Algorithm IV&V Demonstration and Testing	2	2020	3	2020
Deliveries:: CBM+ COTS and Algorithm Production Release	4	2020	4	2020
Cyber Innovations in Classified Environments: Concept Exploration and Refinement	3	2021	2	2022
Cyber Innovations in Classified Environments: Engineering, Integration and Experimentation	2	2022	3	2022
Cyber Innovations in Classified Environments: Pilot Demonstrations	3	2022	4	2022
Cyber Solutions for Aviation Systems and Facilities: Cyber Resilient Operating System Prototyping and Demonstration	3	2021	4	2022
Cyber Solutions for Aviation Systems and Facilities: Risk Assessment tools/facilities, standards and security environments	3	2021	4	2022
Cyber Solutions for Aviation Systems and Facilities: Cyber RDT&E Toolsets	3	2021	4	2022
Cyber Solutions for Aviation Systems and Facilities: Cyber Planning and Response Center (CPRC), Forensics, Incident Response	1	2022	4	2022
Cyber Solutions for Aviation Systems and Facilities: Cyber Naval Aviation Red Team	1	2022	4	2022
Cyber Solutions for Aviation Systems and Facilities: Intelligence support to Defensive and Offensive Cyber	3	2021	4	2022