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COST ($ in Millions)	**Prior Years**	**FY 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
Total Program Element	339.429	87.469	152.977	268.567	-	268.567	375.700	331.988	186.489	160.836	Continuing	Continuing
2901: *AAUSN IT*	46.521	14.704	17.530	34.682	-	34.682	39.230	22.229	5.745	2.287	Continuing	Continuing
2903: *NAVAIR IT*	9.689	5.157	10.915	19.144	-	19.144	19.833	7.818	5.660	2.315	Continuing	Continuing
2904: *NAVSEA IT*	155.226	26.018	64.233	37.855	-	37.855	22.613	20.663	11.934	16.134	Continuing	Continuing
2905: *BUPERS IT*	57.890	26.127	52.957	99.289	-	99.289	162.961	157.299	78.776	64.429	Continuing	Continuing
3167: *Joint Technical Data Integration (JTDI)*	30.215	5.327	2.533	3.883	-	3.883	4.944	4.288	4.036	4.117	Continuing	Continuing
3185: *Joint Airlift Information System (JALIS)*	1.698	0.316	0.348	0.353	-	0.353	0.349	0.356	0.364	0.372	Continuing	Continuing
3432: *NMMES-TR*	0.000	0.000	0.000	44.999	-	44.999	81.579	64.681	58.923	40.561	Continuing	Continuing
9406: *Maintenance Data Warehouse*	38.190	9.820	4.461	28.362	-	28.362	44.191	54.654	21.051	30.621	Continuing	Continuing

Note

The FY 2019 funding request was reduced by $19.023 million to account for the availability of prior year execution balances

A. Mission Description and Budget Item Justification

2901 AAUSN IT

DEPARTMENT OF NAVY TASKING RECORDS AND CONSOLIDATED KNOWLEDGE ENTERPRISE REPOSITORY (DoN TRACKER)
Department of the Navy Tasking, Records and Consolidated Knowledge Enterprise Repository (DON TRACKER - formerly known as Enterprise Records and Task Management (ERTM)) is a single, auditable, compliant Records and Task Management process, implemented uniformly across all DON Divisions and Commands, and administered by DON/AA, to enable efficient and effective execution of Records Management (RM) and Task Management (TM) policy in compliance with statute.

NMCI ENTERPRISE SERVICE TOOLS (NEST)

The increase from FY18 to FY19 is due to the following major efforts: the Middleware Implementation, CDR Integration Implementation and ITPR/Demand Management. These efforts are focused on providing continuity of IT service lifecycle management processes during the transition from NGEN contract to NGEN-R contract(s).

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The NEST is comprised of the NMCI Enterprise Tool (NET) and Requirements to Award Tool (RAPT) user interfaces, which enables the consumption of services from NMCI IT service contracts. RAPT manages the requirements approval process via workflows and stores associated contract documentation. NET serves as the sole customer interface to the order-to-payment process for NMCI. NEST and its associated interfaces manage the lifecycle for NMCI IT services.

ELECTRONIC PROCUREMENT SYSTEM (ePS)

The increase from FY18 to FY19 is required for the start of the Limited Deployment (LD) phase of the ePS program and software hosting. Delivering required functionality to a subset of the DON, LD will involve 210 critical users from five sites and will include data migration, interface development, audit support, software configuration, software installation, test and evaluation, and gap closure. Limited deployment encompasses a contract award in January 2019, originally scheduled for end of FY18. Funding profile has been adjusted to account for shift in award date.

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.

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.

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

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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.

2903 NAVAIR IT

JOINT CONFIGURATION MANAGEMENT INFORMATION SYSTEM (JCMIS)
The Joint Configuration Management Information System (JCMIS) Program is Department of Defense (DoD) standard software system for complete and integrated configuration management (CM) of weapon systems from acquisition to disposal. JCMIS efficiently manages all product structure data, including complex interrelationship between assemblies and subassemblies, technical documentation and the parts that comprise the item. JCMIS is designed to manage and control configuration data to support the DoD business processes. 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 JCMIS, as instant consistent integrated configuration data is readily available to operators, maintainers and logistics personnel. This system is a CM tool available DoD wide to support all potential customers. JCMIS provides users with a common database infrastructure to ensure compatibility, quality, and consistency of 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 COTS upgrades to ensure objective performance of JCMIS is achieved.

TASK FORCE CYBER AWAKENING (TFCA)

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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.
Funding is a continued investment as part of Navy's Cyber strategic priorities to address emergent intelligence and increased cyber threat environment to Naval Aviation weapon systems readiness, survivability and mission assurance in cyber contested environments. Investments are focused on Naval Air Systems Command aircraft, weapons or support equipment, commonly known as Platform Information Technology (PIT) - Control systems, to ensure cyber resiliency and warfighting effectiveness. Investments will develop enterprise tailored solutions, infrastructure capabilities, procedures and customized tools necessary to increase the cyber resiliency of our aircraft, weapons and support equipment against advanced adversary threats in cyber contested environments. These 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.

DIGITAL THREAD (DT)
Digital Thread - Digital Thread (DT) is digital process integration with complete, secure and authoritative data. DT integrates the product life cycle, and includes all the processes that are needed to design, develop, test, produce, and support a product. By connecting these processes, and using a standardized set of digital tools and data, the DT accelerates the product development cycle and lowers costs for support and new capability integration.

The Digital Thread solution also includes development and demonstration of cyber security architectures for sustainment information systems, and development of a digital manufacturing data architecture and repository.

2904 NAVSEA IT

This program includes the funding for Information Technology (IT) support at NAVSEA for the development, support, and sustainment of maritime shore maintenance and includes multiple modernization efforts to insure effectiveness of Fleet maintenance systems as part of the current Navy Maritime Maintenance Enterprise Solution (NMMES). These efforts include retirement and/or replacement of costly legacy systems, transition planning and systems engineering for integration with national and enterprise interim and future solutions. These efforts align with direction to insure that proposed interim solutions support a planned, single maintenance solution end state, as well as direction to align with data center consolidation plans proposed across the FYDP. It includes the modernization of Naval Shipyard and Regional Maintenance Centers' Maintenance, Repair and Overhaul (MRO) production tools. This includes modifications/enhancements to Shipyard IT systems, such as Advanced Industrial Management (AIM); Project Scheduling and Sequencing (PSS); Workload and Performance Systems; the COST and MAT systems, and other solutions such as the Electronic Technical Working Document (eTWD) Initiative. The goal of PMO-IT is to provide modernization, migration and consolidation of obsolete legacy systems to the next generation of centrally hosted tools supporting Fleet Maintenance and national systems for the Navy.

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2905 BUPERS IT

Research and Development Funds for MPT&E Transformation under PE 0604703N have been consolidated within PE 0605013N PU 2905 starting in FY19.

This effort is the linchpin of the Navy's MPT&E (Manpower, Personnel, Training & Education) business IT Transformation strategy which 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 not cost efficient nor effective. The Transformation strategy involves revolutionary change by rapid implementation of MPT&E business IT products using the Industry Best Practices Model (e.g., early investment for largest ROI, rapid prototyping, and vanilla COTS products usage.) Four projects are the cornerstones of the N1 Transformation strategy. The Navy Standard Integrated Personnel System (NSIPS) will become Navy Personnel and Pay (NP2) and includes personnel and pay modernization and the collapse of Legacy Manpower System functionality. Second, a Single Point of Entry (SPOE) for Sailor self-service is composed of My Navy Portal (MNP), Identity and Access Management (IdAM), a Customer Relations Management (CRM) solution, and a centralized and standardized customer service center (The My Navy Career Center (MNCC)). Third, MPT&E Core Learning Stack improves the accessibility, sophistication, and collaborative nature of educational outreach. Finally, the Authoritative Data Environment (ADE) will enable the collapse of 9 legacy data warehouses into a single, authoritative source of truth for Sailors and Navy decision makers. Additionally, ADE will enable modern data analytics and business intelligence capabilities, taking advantage of current state of practice cloud services, to be leveraged in addressing the Navy's current challenges.

BILLET BASED DISTRIBUTION (BBD)

BBD is a Sailor 2025 initiative aimed at modernizing distribution and order writing systems. The effort begins functional work and follow-on development to collapse Navy Reserve Order Writing System (NROWS), Navy Marine Corps Mobilization Processing System (NMCMPS), Enlisted Assignment Information System (EAIS), and Officer Assignment Information System (OAIS) into a single distribution system. The objective of BBD is to increase personnel readiness, improve fit and provide clear visibility to the impact on mission readiness at the billet level. BBD will facilitate maximizing the contributions of every member of the Navy workforce by delivering competency-based career paths. As part of the Navy's transformation initiative, BBD will be consolidated into the MPT&E Personnel and Pay System technology component.

LEARNING MANAGEMENT SYSTEM - DISTANCE LEARNING (LMS-DL)

LMS-DL is aligned with the Learning Stack (LS) technology component of the Navy's Transformation initiative. LMS-DL supports ready relevant learning, with a focus to align Navy learning, create a career learning continuum, and leverage evolving technologies to expand learning solutions when and where the Sailor needs them. The collaborative learning environment (CLE) is a key component within the learning IT strategy that leverages Commercial-Off-the-Shelf products to integrate the CLE with intelligent tutors, a multi-purpose reconfigurable training system (MRTS), electronic classrooms (ECR), trainers and labs, interactive multimedia instruction (IMI), instructors, and a virtual environment.

As part of the Transformation holistic IT approach, ready & relevant learning requires the development of a Learning Management System that permits:

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(1) Mobile & flexible delivery of modular training to the sailor
(2) Synchronization of work requirements with learning modules to ensure proper training is delivered at the right time

This funding will develop and deploy new technologies for modularized training in fleet concentration areas to support the continuum of learning to include:

(1) Development, modification or replacement of the current LMS platform
(2) Integration of Manpower, Personnel, Training and Education (MPTE) management tools to support end to end business processes (billet information, assignment, distribution, student management, learning management, personnel information, advancement) that will be impacted by changes to learning delivery and career profiles via Progressive NECs (e.g. Legacy systems: TFMMS,NSIPS, Learning Assessment System, Navy Training Management Planning System and future transformation systems: NP2 and ADE.)

The Learning Management tools and supporting IT infrastructure must also be modified to support management of training into the Delayed Entry Program, the growing use of demonstration videos, social media, student and learning management for MPTE mobility efforts, gaming and simulation technology as it is brought on-line.

LMS-DL will also introduce the Learning Continuum Pilot, a risk reduction effort that develops proof of concept alignment of sailor training requirements with learning content delivery.

MY NAVY PORTAL (MNP)

MNP is aligned with the single point of entry (SPOE) technology component of the Navy's IT Transformation initiative. MNP is an integrated web portal that consolidates the Navy's Human Resource portals, knowledge, and applications into a single and simplified user experience. Through the use of a multi-phased development approach, MNP will provide an intuitive self-service single point of entry (SPOE) for Sailors to view and manage their personnel and career information. MNP provides Active and Reserve Sailors with personalized interactive experiences and allows access to relevant information including learning content, human resource applications, and career business processes.

ANALYSIS OF ALTERNATIVE/ECONOMIC ANALYSIS (AOA)

The Navy will conduct multiple AoAs and studies to analyze viable alternatives in order to determine the most efficient and effective solution to address the modernization of elements of the Navy's Manpower, Personnel, Training and Education (MPT&E) IT portfolio. AOA will assess operational effectiveness, suitability, and costs of non-tactical systems to meet emerging capability requirements.

NAVY STANDARD INTEGRATED PERSONNEL SYSTEM (NSIPS)(will become NP2)

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The NP2 increase in FY19 supports the de-customization of the Navy Standard Integrated Personnel System (NSIPS) and integration of Direct to Treasury Pay Capability via Pay Modernization (Pay Mod). This combined effort (named NP2) will result in an integrated, 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. FY19 efforts include:

1. Continuation of the second Field Test including agile development of Treasury Direct Disbursing (TDD) and Active Component / Reserve Component (AC/RC) Permeability.
2. Migration of field test to a secure and accredited commercial cloud hosting solution.
3. Completion of Legacy NES and OPINS consolidation efforts.
4. Integration of Bi-Service PeopleSoft license with NSIPS personnel and pay modernization solution.

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 MPT&E 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. This combined effort (named NP2) will result in an integrated, 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 sunsetting DJMS 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.

Efforts in FY19 are focused on system development, testing and delivery of core components associated with Military Pay, Personnel Transactions that effect Pay, Auditability, Accounting, and Treasury Direct Disbursement. Beyond F19, development will continue and will bring continued integration of legacy systems such as those used for detailing and distribution, management of Sailor performance, and talent management and matching.

NAVY MANPOWER REQUIREMENTS SYSTEM (NMRS)

NMRS will modernize obsolete software and incorporate a wide array of enhancements (expanded capabilities based on sponsor's approved Functional Requirements Document) of new capabilities in support of Manpower Requirement efficiencies.

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NMRS is a key tool which Navy manpower managers rely on to set, implement, and execute manpower requirements. Recommendations for improving data bases and the Navy's mobilization capacity rely on NMRS to make strength determinations. The planned effort also includes technical evaluation and integration of products produced by the Simulation Toolset for Analysis of Mission, Personnel and Systems (STAMPS) program. As envisioned by the Navy's Transformation initiative, NMRS will eventually be consolidated into the MPT&E Personnel and Pay System technology component of the transformation.

RISK MANAGEMENT INFORMATION (RMI)

The RMI program is a consolidation of DON risk management requirements into a single Program of Record (POR) to provide modern safety reporting and management capabilities for both active and reserve Navy and Marine Corps commands. RMI enables agile responses to business rule changes, automation of routine actions, improved data integrity, and facilitates self-service for organizations and individuals.

RMI is being developed in three increments of capabilities: Streamlined Incident Reporting (SIR), Safety Program Management (SPM), and Analysis & Dissemination (A&D). A fourth requirement, Single Point of Entry (SPOE) integration, will be accomplished as part of the development of the three RMI increments since each will be built on the same Commercial Off The Shelf (COTS) platform. Each of these capabilities will be acquired as individual Abbreviated Acquisition Programs using an incremental development approach for reengineered business processes, while consolidating five legacy systems Web-Enabled Safety System (WESS), Enterprise Safety Application Management Systems (ESAMS), Portsmouth Occupational Accident and Illness Reporting System (POAIRS), Medical Mishap and Compensation (MMAC), and Injury Tracker (INJTRK).

AUTHORITATIVE DATA ENVIRONMENT (ADE)

ADE is part of the Navy's MPT&E IT Transformation initiative aligned directly with the Authoritative Data Environment technology component of the transformation. ADE is aimed at transitioning the current project based ADE into a full enterprise solution that is based on modern IT service models and cloud hosting technology. This will advance data analytics and visualization capabilities, and add common platform services in a big data environment that is consistent with private industry. This acceleration toward a true Navy-wide personnel authoritative data environment is a transformational increase in capability for decision support and improving personnel readiness.

As part of the Transformation strategy, the Chief of Naval Personnel has directed expansion and improvements of the ADE in making MPT&E data more available to commanders, sailors, business owners and fleet executive leadership. The ADE provides infrastructure, operations and sustainment of the Navy MPT&E Authoritative Data Warehouse(ADW), enterprise service bus, and web support services.

The capabilities delivered by this funding include:
(1) Completed "golden record" expansion increments
- Data quality
- Governance
- Security

- Data standardization
(2) Increased capabilities for MPT&E supply chain & business operations
- Data discovery
- Advanced visualization tools
- Predictive analytics
(3) Enhanced architecture to support unstructured data and "big data" analytics
(4) Improved support for future identity management & access for mobile device capability

APPLICANT RELATIONSHIP MANAGEMENT (ARM)

ARM provides automated support of the management of recruiting information. ARM enables all levels of recruiting to have real-time access to timely and accurate information. ARM provides managers with decision-making support by consolidating Navy Recruiting Command (NRC) legacy application systems. The complete ARM Systems Dev/Mod effort will incorporate biometrics and paperless implementation across all lines of business systems to gain additional efficiencies.

Included in the ARM program is the Self Service Accessions Application (SSAA). Phase II of this effort will build the SSAA application into the ARM system. SSAA is a mobile device-based software application. SSAA supports a change in the NRC business processes from a recruiter-driven business model to an applicant self-service business model. This "app" will be used by applicants to collaborate with recruiters anytime & anywhere to more efficiently and effectively navigate the recruiting process. As envisioned by the Navy's Transformation initiative, ARM will eventually be consolidated into the SPOE Customer Relations Management (CRM) System.

3167 JOINT TECHNICAL DATA INTEGRATION (JTDI)

JOINT TECHNICAL DATA INTEGRATION (JTDI)
Increased funding for development of JTDI Data Transport Battlegroup Survivability Enhancements ensuring Tech Data is available for fleet users in degraded mode networks or during complete loss of access to land-based top tier servers. It will be used to develop the JTDI Standard Data Repository providing a Big Data Storage and access solution enabling an advanced Enterprise Common CBM+ data analysis solution.
Funding supports the evaluation, testing and integration to develop a JTDI Commercial-Off-The-Shelf (COTS) solution for installation on a Carrier (CV) and Amphibious Assault (L) class ships and up to 104 Navy/Marine Corp aviation activities. JTDI is a digital technical data access, delivery and local O&I level library management toolset and telemaintenance collaboration process enabler. 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 saving Return on Investment (ROI) of 2.5:1. It facilitates the transition of the Joint Distance Support and Response (JDSR) Advanced Concept Technology Demonstration (ACTD) for telemaintenance 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.

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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)

9406 MAINTENANCE DATA WAREHOUSE
The Aviation Logistics Environment (ALE) program is the Naval Aviation Information Technology (IT) solution to deliver full lifecycle weapon system logistics and maintenance capabilities to the functional Naval Aviation Support Process (NASP). It will deliver these capabilities via a net centric, shared data environment that supports shore based, afloat, and expeditionary operations. The ALE integrates IT services plane-side and interfaces with infrastructure systems where necessary. ALE is a major logistics enterprise solution and a part of the total enterprise solution architecture. ALE is designed to structure IT services so that they can connect with other parts of the enterprise solution set, thus enabling an interoperable end-to-end business process. ALE consolidates Naval Aviation data into an integrated data environment for high level analysis. The purpose of ALE is to integrate, organize, and develop an underlying infrastructure and analytical capacity across the NASP in order to generate a holistic timely picture of readiness and condition for all T/M/S. ALE will be providing modern Product Lifecycle Management (PLM), Decision Support (Predictive Analytics), Planeside Interfacing, and the Enterprise Infrastructure to support the NAE. The ALE program is a "system of systems" that will provide a common, integrated data environment that will enable NAE Vision 2020 data transparency across the Naval Aviation Enterprise; end-to-end process view to enable

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both consuming and providing on-demand information to stakeholders; a capability to view "digital twins" of all T/M/S for both allowable and as-configured states; a consolidation of aging, near-end-of-life systems and applications to modern technology and cost efficient support infrastructures; consistent and accurate weapons systems technical and CAD engineering documentation to support additive manufacturing capabilities; standardized metrics, algorithms, and business analysis tools; an architecture that enables migration to the cloud; and alignment to Information Assurance (IA) and Cybersecurity standards, and Risk Management Framework (RMF) compliance.

Vector (formally Integrated Logistics Management System (ILSMS)) supports the development of a common logistics analytical application that uses disciplined approach to Business Intelligence (BI) architecture that combines products, technology and methods aimed at key Naval Aviation Enterprise (NAE) business processes providing a single data source which focuses on aircraft readiness, maintenance, supply, cost, and man-hours. Vector provides naval aviation with a common source for 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, and 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. Aviation Logistics Environment (ALE) reduces ~33 disparate IT systems into a single unified governance ecosystem, and allows for modernization of existing software, hardware, and infrastructure in order to improve cyber readiness and support aircraft and weapons logistics information exchange requirements. Establishment of ALE provides the NAE one common Logistics IT solution for readiness reporting and maintenance at a reduced sustainment cost.

CONDITION BASED MAINTENANCE PLUS (CBM+)
Through automated analysis and decision making processes, the CBM+ Initiative 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. The CBM+ Initiative increases readiness by streamlining maintenance processes, provide the sustainment base with timely, actionable logistics data not previously available, and enable engineers and acquisition professionals to support system improvements based on CBM+ acquired data results. CBM+ provides the enabling solutions needed 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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy					Date: February 2018
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*		
B. Program Change Summary ($ in Millions)	**FY 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**
Previous President's Budget	97.066	152.977	168.639	-	168.639
Current President's Budget	87.469	152.977	268.567	-	268.567
Total Adjustments	-9.597	0.000	99.928	-	99.928
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-3.082	0.000			
• Program Adjustments	0.000	0.000	102.194	-	102.194
• Rate/Misc Adjustments	0.000	0.000	-2.266	-	-2.266
• Congressional General Reductions Adjustments	-0.015	-	-	-	-
• Congressional Directed Reductions Adjustments	-6.500	-	-	-	-

Change Summary Explanation

The FY 2019 funding request was reduced by $19.023 million to account for the availability of prior year execution balances

Technical: Not applicable.

Schedule Change: 2901, Electronic Procurement System, Contract Writing System award date shifted from Q4 FY18 to Q2 FY19 due to delay in the Request For Proposal (RFP) release that incorporated requirements changes associated with cloud hosting.

Funding increases addressed within individual projects.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy											Date: February 2018	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*				Project (Number/Name) 2901 / *AAUSN IT*			
COST ($ in Millions)	**Prior Years**	**FY 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
2901: *AAUSN IT*	46.521	14.704	17.530	34.682	-	34.682	39.230	22.229	5.745	2.287	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

DON/AA IT Modernization (formerly AA USN IT)

SYSTEM MODERNIZATION & ANALYTICAL TOOLS: The Secretariat Automated Resources Management Information System (SARMIS) is a financial tool used by the Secretariat to formulate, execute, and report changes to organizational resources. DON/AA employs this system to support financial and resource decisions for all Secretariat activities. SARMIS produces budget materials and analysis, as well as generating allocation data. In addition, SARMIS contains organizational manpower data that assists our leaders in making necessary personnel decisions for the Secretariat. The SARMIS application is currently operating on a severely outdated and underperforming platform. This results in additional administrative overhead, error corrections, and development fixes to maintain current operations. This RDTEN funding is used to upgrade this critical software capability to a new platform, comply with mandatory DOD cyber security requirements, and develop new reporting and integration capabilities.

ASN(M&RA) IT System Modernization for BCNR:
The CAPS-II, CRSC, and BCNR programs are used by the Navy Clemency and Parole Board (NCPB), the Combat Related Special Compensation Board (CRSC), and the Board of Corrections of Naval Records (BCNR) to process and adjudicate approximately 17,200 cases per year. The current system defects have resulted in additional man-hours and reduced reporting functionality. This has created a longer manual process and hinders adequate statistical data from being retrieved. As a result, congressional inquiries take longer to satisfy and accuracy cannot be guaranteed. RDTEN funding will be used to redevelop systems for the CAPS-II, CRSC, and BCNR in order to meet reporting requirements, enhance system capabilities, and gain compliance with current IT standards.
DON TRACKER

Department of the Navy Tasking, Records and Consolidated Knowledge Enterprise Repository (DON TRACKER - formerly known as Enterprise Records and Task Management (ERTM)) is a single, auditable, compliant Records and Task Management process, implemented uniformly across all DON Divisions and Commands, and administered by DON/AA, to enable efficient and effective execution of Records Management (RM) and Task Management (TM) policy in compliance with statute.

ELECTRONIC PROCUREMENT SYSTEM (ePS)

The increase from FY18 to FY19 supports the start of the Limited Deployment (LD) phase of the ePS program and software hosting. Limited deployment includes contract award in January 2019, originally scheduled for end of FY18. Funding profile has been adjusted to account for shift in award date. Additional efforts associated with LD include software configuration, software installation, test and evaluation, data migration, interface development, and gap closure.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *AAUSN IT*

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 facilitate integration 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 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 issues accurate and timely contracts in a standard format that comply with all DoD/ Federal laws, regulations, and policies.

NMCI ENTERPRISE SERVICE TOOLS(NEST)

The increase from FY18 to FY19 is due to the following major efforts: the Middleware Implementation, CDR Integration Implementation and ITPR/Demand Management. These efforts are focused on providing continuity of IT service lifecycle management processes during the transition from NGEN contract to NGEN-R contract(s).

The NMCI Enterprise Service Tools (NEST) is the NMCI IT service management system that supports the Navy IT service lifecycle business workflow. The NEST currently is comprised of two government owned tools, the NMCI Enterprise Tool (NET) and the Requirements to Award Process Tool (RAPT), which enables and manages the business workflow. NET is a custom NET 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. NET serves as the single point of entry for lifecycle management of IT services on the NMCI network.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: CORB IT System Moderization	0.500	0.000	1.058	0.000	1.058
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *AAUSN IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Description: CORB's eCase IT system replaces out-of-date systems and furthers CORB's digitization effort. The CAPS-II, CRSC, and BCNR programs are used by the Navy Clemency and Parole Board (NCPB), the Combat Related Special Compensation Board (CRSC), and the Board of Corrections of Naval Records (BCNR) to process and adjudicate approximately 17,200 cases per year. The current system defects have resulted in additional man-hours and reduced reporting functionality. This has created a longer manual process and hinders adequate statistical data from being retrieved. As a result, congressional inquiries take longer to satisfy and accuracy cannot be guaranteed. ***FY 2018 Plans:*** No funding planned for FY 2018. ***FY 2019 Base Plans:*** RDTEN funding will be used to redevelop systems for the CAPS-II, CRSC, and BCNR in order to meet reporting requirements, enhance system capabilities, and gain compliance with current IT standards. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase for the redevelopment of systems for CAPS-II, CRSC, and BCNR in order to meet reporting requirements, enhance system capabilities, and gain compliance with current IT standards.					
Title: Modernization - Secretariat	1.116	0.703	0.400	0.000	0.400
Articles:	-	-	-	-	-
Description: The Secretariat has numerous requirements to modernize its financial management system and portal applications. SARMIS will be updated from older technologies to include new FIAR and web based requirements. These upgrades are necessary to continue functionality of the system and ensures timely, accurate and efficient operation of the Secretariat's mission. ***FY 2018 Plans:*** Continue with FY2017 modernization and design effort. ***FY 2019 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *AAUSN IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Complete modernization effort. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding supporting two modernization projects -- Secretariat and CORB IT System -- were reprioritized to meet planned project schedule. Funding from Secretariat modernization project effort was realigned to CORB IT System project.					
Title: Department of the Navy Tasking, Records and Consolidated Knowledge Enterprise Repository (DON TRACKER) ***Articles:*** ***Description:*** The DON TRACKER will streamline DON's electronic records and task management processes under a consolidated enterprise solution and will enable the DON to capture unstructured and structured electronic records, seamlessly manage tasking across and within all commands, ensure uniform metadata of content, provide workflow-enabled reporting, and aid in compliance with all applicable laws, policies, and regulations. In addition, this will eliminate duplicative capabilities and result in cost-saving opportunities and efficiencies. The DON TRACKER solution will be extended to all authorized, shore and afloat-based users across the DON enterprise, including the Continental United States (CONUS) and Outside the Continental United States (OCONUS) communities. ***FY 2018 Plans:*** 1. Conduct Production Readiness Review for DON TRACKER v1.4 2. Begin Deployment ***FY 2019 Base Plans:*** N/A ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** FY18 to FY19 decrease of $465K due to the full deployment of the DoN Tracker capability in FY19.	0.577 -	0.465 -	0.000 -	0.000 -	0.000 -
Title: NMCI Enterprise Service Tools (NEST) ***Articles:***	0.000 -	5.200 -	6.880 -	0.000 -	6.880 -

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *AAUSN IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Description: The NMCI Enterprise Service Tools (NEST) is the NMCI IT service management system that supports the Navy IT service lifecycle business workflow. The NEST comprises two government owned tools, the NMCI Enterprise Tool (NET) and the Requirements to Award Process Tool (RAPT), which enables and manages the business workflow. NET is a custom NET 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. NET serves as the single point of entry for lifecycle management of IT services on the NMCI network. ***FY 2018 Plans:*** - Conduct configuration and development of NEST Releases to attain the following capabilities: -Integration with Defense Logistics Agency (DLA) and Defense Finance Accounting System (DFAS) via Global Exchange (GEX), invoicing and delivery request, ONE-NET integration - Conduct middleware analysis - Conduct Central Data Repository (CDR) Integration Analysis. - Conduct Integrated Solution Framework (ISF) Tools Requirement Analysis & Implementation. - Conduct DFAS Auditability Analysis & Implementation (Compliance and Continuous Improvement). - Reconfiguration of the NET for compliance with DFAS audit requirements, reconfiguration of the hosting environment from a service hosted enclave to a government approved hosting facility. ***FY 2019 Base Plans:*** - Continue configuration and development of NEST Releases to attain the following capabilities: - integration with Defense Logistics Agency (DLA) and Defense Finance Accounting System (DFAS) via Global Exchange (GEX), invoicing and delivery request, ONE-NET integration - Start middleware integration - Start Central Data Repository (CDR) Integration. - Continue Integrated Solution Framework (ISF) Tools Requirement Analysis & Implementation. - Continue DFAS Auditability Analysis & Implementation (Compliance and Continuous Improvement) (I.e. SLOA, PIID, PDS, WAWF, etc.) - Continue reconfiguration of the NEST for compliance with DFAS audit requirements, reconfiguration of the hosting environment from a service hosted enclave to a government approved hosting facility					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *AAUSN IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
- Conduct Analysis & Implementation ITPR/Demand Management - provide an analysis to understand process and tools to manage service requirement demands. Implementation to enable automation of approval business process for all new IT procurement requests. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** The increase from FY18 to FY19 for the NMCI Enterprise Service Tools (NEST) is due to the following major efforts: the Middleware Implementation, CDR Integration Implementation and ITPR/Demand Management. These efforts are focused on providing continuity of IT service lifecycle management processes during the transition from NGEN contract to NGEN-R contract(s).					
Title: Electronic Procurement System (ePS) ***Articles:*** ***Description:*** Funding required for the Electronic Procurement System (ePS) to provide support for source selection, configuration, integration, testing, training, deployment and implementation of the system. ***FY 2018 Plans:*** - Begin Navy Enterprise Resource Planning (ERP) programming changes required for interfacing with ePS. - Conduct Source Selection so that contractor proposals can be evaluated. - Continue NESB data mapping efforts required for ePS Limited Deployment, including sending committed Purchase Requisition (PR) data from additional financial systems (IMPS, PR Builder, and Standard Accounting, Budgeting and Reporting System (SABRS)) to the Electronic Procurement System (ePS); and sending award data from ePS to Navy financial systems (Navy ERP, IMPS and SABRS). - Increase Systems Engineering efforts to include additional data mapping to DON financial systems and data profiling, updating required documentation, updating architecture models, preparing for cyber security requirements, and developing required testing plans. Systems engineering efforts, specifically data mapping, will reduce significantly upon start of limited deployment. - Begin data cleansing and logistics analysis in preparation for data migration from legacy systems into the new ePS solution to reduce the risk of data migration errors. - Continue Project Management efforts including source selection, implementation preparation, scheduling, configuration management, and updating required documentation for Authority to Proceed (ATP) decision. ***FY 2019 Base Plans:***	12.511 -	11.162 -	26.344 -	0.000 -	26.344 -

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *AAUSN IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
- Award the contract to the vendor selected by the Source Selection Authority to begin Limited Deployment. Limited deployment will span across five sites and will include 210 critical users (contracting and grants professionals). Limited deployment will encompass: o Data migration from four systems to one across five databases and five servers o Interface development and testing for four systems (PR Builder, Standard Accounting Budgeting System (SABRS), Navy ERP, and Integrated Management Processing System (IMPS)) o Systems configuration and gap closure to ensure all DON contracting requirements for ePS system are met and a commercially viable solution is provided o Systems engineering o Enterprise architecture support o Quality assurance o Development of training material o Over-the-shoulder support as part of implementation - Continue data cleansing and logistics analysis in preparation for data migration from legacy systems into the new ePS solution to reduce the risk of data migration errors. - Software/cloud hosting (Dev/Test environments) - Conduct the necessary Navy reviews to achieve ATP ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** FY18 funding focuses on initial systems engineering and efforts associated with the preparation for the Limited Deployment contract award. FY19 funding increase required for significant workload increase associated with execution of the Limited Deployment contract, testing, data migration and hosting.					
Accomplishments/Planned Programs Subtotals	14.704	17.530	34.682	0.000	34.682

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 8106: *Command Support Equipment*	1.875	3.658	2.701	-	2.701	5.815	0.000	0.000	0.000	0.000	14.049

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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D. Acquisition Strategy

The NMCI Acquisition strategy aims to shift the DON to a multi-vendor, multi-contract environment that aims to provide government-owned IT service lifecycle management. The NEST tools are currently being updated to incorporate enhancements that will enable to new environment.
MODERNIZATION - Contract will be awarded under a competitive, all source, RFP. NO ACAT

The selected contractor must have knowledge of the existing information systems pertinent to the task. They must also have the corporate experience and a staff of knowledgeable personnel to provide the required services. The task will be monitored by the Contracting Officer Representative (COR), who reviews technical data submissions, system deliverables, and invoices to ensure acceptable contractor performance and scheduled deliveries.

CORB IT System Modernization:

Contract will be awarded under a competitive, all source, RFP. NO ACAT

DON TRACKER
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.

This planned acquisition will be a Cost-Plus-Fixed-Fee (CPFF) single award Indefinite Delivery Indefinite Quantity (IDIQ) contract to a selected Vendor in support of sustainment, software development, legacy data transfer, and additional fielding of the DON TRACKER application.

ELECTRONIC PROCUREMENT SYSTEM (ePS)
The ePS program intends to award a 10-year hybrid contract to a single System Integrator (SI). The SI (Prime) 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 (BPM) tools, Business Process Re-Engineering (BPR), COTS updates, or a secondary COTS solution).

E. Performance Metrics

Program cost, schedule and performance are measured using a systematic approach with approved programs and methods. The results of these measurements are presented to DON/AA management through a governance review board process on a regular basis to determine program effectiveness and to provide new direction as needed to ensure the efficient use of

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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resources. To monitor and manage the execution of projects in addition to other IT investments, management and governance boards review metrics and key performance indicators that are outlined in various plans. Some of the plans that expound on the data captured to attribute to performance measures include: Project Management Plan, Risk Mitigation Plan, Communication Plan, Procurement Plan, and a Certification & Accreditation Plan.
Other specific performance measurements include:
1. Actual versus planned project scope
2. Actual versus planned time schedule
3. Actual versus planned costs
4. Actual versus planned risks and the mitigation of those risks

BCNR IT System Modernization specific performance measurements include Navy Clemency and Parole Board (NCPB) and the Combat Related Special Compensation Board (CRSC) which process 17,200 cases per year.
.
DON TRACKER
PII-100% of flagged PII shall be protected
Automation-95% of requests will be processed using automated system without a manual workaround
Operational Availability-99% of transactions shall be resolved correctly per System Accuracy definition

ELECTRONIC PROCUREMENT SYSTEM (ePS):
Reliability:
(Threshold) Mean Time Between Failure (MTBF) >= 720 Hours (Hrs)
(Objective) Mean Time Between Failure (MTBF) >= 1080 Hrs

Operational Availability:
(Threshold) = 96% Including Scheduled Downtime
(Objective) = 99.5% Discounting Scheduled Downtime

Maintainability:
(Threshold) Mean Time to Repair (MTTR) <= 6.7 Hrs
(Objective) Mean Time to Repair (MTTR) <= 2.7 Hrs

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 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	Continuing	Continuing	Continuing
Contractor Engineering Support (DONCJIS)	SS/T&M	Interimage Inc. : Manassas, VA	1.272	0.000		0.000		0.000		-		0.000	0.000	1.272	-
Software Development	C/FP	Dell Marketing LP : Round Rock, TX	1.938	0.000		0.000		0.000		-		0.000	0.000	1.938	-
Software Development (CLEOC)	C/FP	NSA : Various	0.500	0.000		0.000		0.000		-		0.000	0.000	0.500	-
Software Development (EPS)	TBD	NA : NA	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
SYSTEM Moderization	WR	SPAWAYSYSCEN ATLANTIC : CHARLESTON, SC	1.834	1.116	Oct 2016	0.703	Oct 2017	0.400	Oct 2018	-		0.400	0.000	4.053	-
CORB SYSTEM Modernization	WR	SPAWASYSTEM : CHARLESTON, SC	0.500	0.500	Oct 2016	0.000		1.058	Oct 2018	-		1.058	0.000	2.058	-
DON TRACKER Engineering	C/CPFF	Progeny : Manassas, VA	5.172	0.577	Feb 2017	0.465	Feb 2018	0.000		-		0.000	Continuing	Continuing	Continuing
ePS Data Transition Strategy	Various	NAVSUP BSC : Mechanicsburg, PA	1.502	0.100	Nov 2016	0.100	Nov 2017	0.000		-		0.000	0.000	1.702	-
ePS NESB Data Mapping	C/FP	BOOZ ALLEN : Tysons Corner, Va	5.400	1.300	Dec 2016	0.450	Dec 2017	0.000		-		0.000	0.000	7.150	-
NESB Configuration and Validation	C/FP	SPAWAR : San Diego, CA	7.371	0.000		0.000		0.000		-		0.000	0.000	7.371	-
Contract Writing System (ePS)	C/FP	TBD : TBD	0.000	0.000		0.000		20.130	Jan 2019	-		20.130	Continuing	Continuing	Continuing
NERP Interface Analysis (ePS)	Various	SPAWAR : San Diego, CA	0.000	1.409	Jul 2017	1.000	Jun 2018	0.000		-		0.000	0.000	2.409	-
		Subtotal	30.044	5.002		2.718		21.588		-		21.588	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 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	0.000	3.734	-
Cost Analysis (ePS)	C/CPFF	SPAWAR : San Diego, CA	1.045	0.000		0.000		0.000		-		0.000	0.000	1.045	-
Systems Engineering (ePS)	Various	SPAWAR : San Diego, CA/ Charleston, SC	7.464	5.634	Oct 2016	6.020	Oct 2017	2.884	Jun 2019	-		2.884	Continuing	Continuing	Continuing
Logistics Analysis (ePS)	Various	SSC LANT : Charleston, SC	1.204	0.227	Oct 2016	0.230	Oct 2017	0.230	Oct 2018	-		0.230	Continuing	Continuing	Continuing
Requirements Validation (EPS) - Small Business set aside	C/FFP	SPAWAR : San Diego, CA	1.500	0.000		0.000		0.000		-		0.000	0.000	1.500	-
Project Management/ Implementation	Various	Enterprise Horizion : San Francisco, CA	0.000	1.756	Nov 2016	1.780	Nov 2017	0.800	Nov 2018	-		0.800	0.000	4.336	-
ePS Engineering Services - Small Business set aside	Various	Bowhead : Alexandria, VA	0.000	1.170	Jun 2017	1.482	Jun 2018	0.200	Jul 2019	-		0.200	0.000	2.852	-
ePS Testing and Validation/ Architecture Tool	Various	NSWC Dahlgren : Dahlgren, VA	0.000	0.050	Nov 2016	0.050	Nov 2017	0.050	Nov 2018	-		0.050	0.000	0.150	-
System Engineering Support (NEST)	C/CPFF	Deloitte : Rosslyn, VA	0.000	0.000		5.200	Nov 2017	6.880	Nov 2018	-		6.880	Continuing	Continuing	Continuing
		Subtotal	14.947	8.837		14.762		11.044		-		11.044	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing Preparations (ePS)	C/FFP	SSC LANT : Charleston, SC	0.800	0.000		0.000		0.000		-		0.000	0.000	0.800	-
Software Hosting (ePS)	C/FP	SPAWAR : San Diego, CA	0.000	0.815	Sep 2017	0.000		2.000	Jan 2019	-		2.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing (ePS)	C/FP	OPTEVFOR : NORFOLK,VA	0.230	0.050	Jun 2017	0.050	Jun 2018	0.050	Jun 2019	-		0.050	Continuing	Continuing	Continuing
		Subtotal	1.030	0.865		0.050		2.050		-		2.050	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ePS Program Support	C/FFP	PEO EIS : Arlington, VA	0.500	0.000		0.000		0.000		-		0.000	0.000	0.500	-
		Subtotal	0.500	0.000		0.000		0.000		-		0.000	0.000	0.500	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	46.521	14.704		17.530		34.682		-		34.682	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *AAUSN IT*

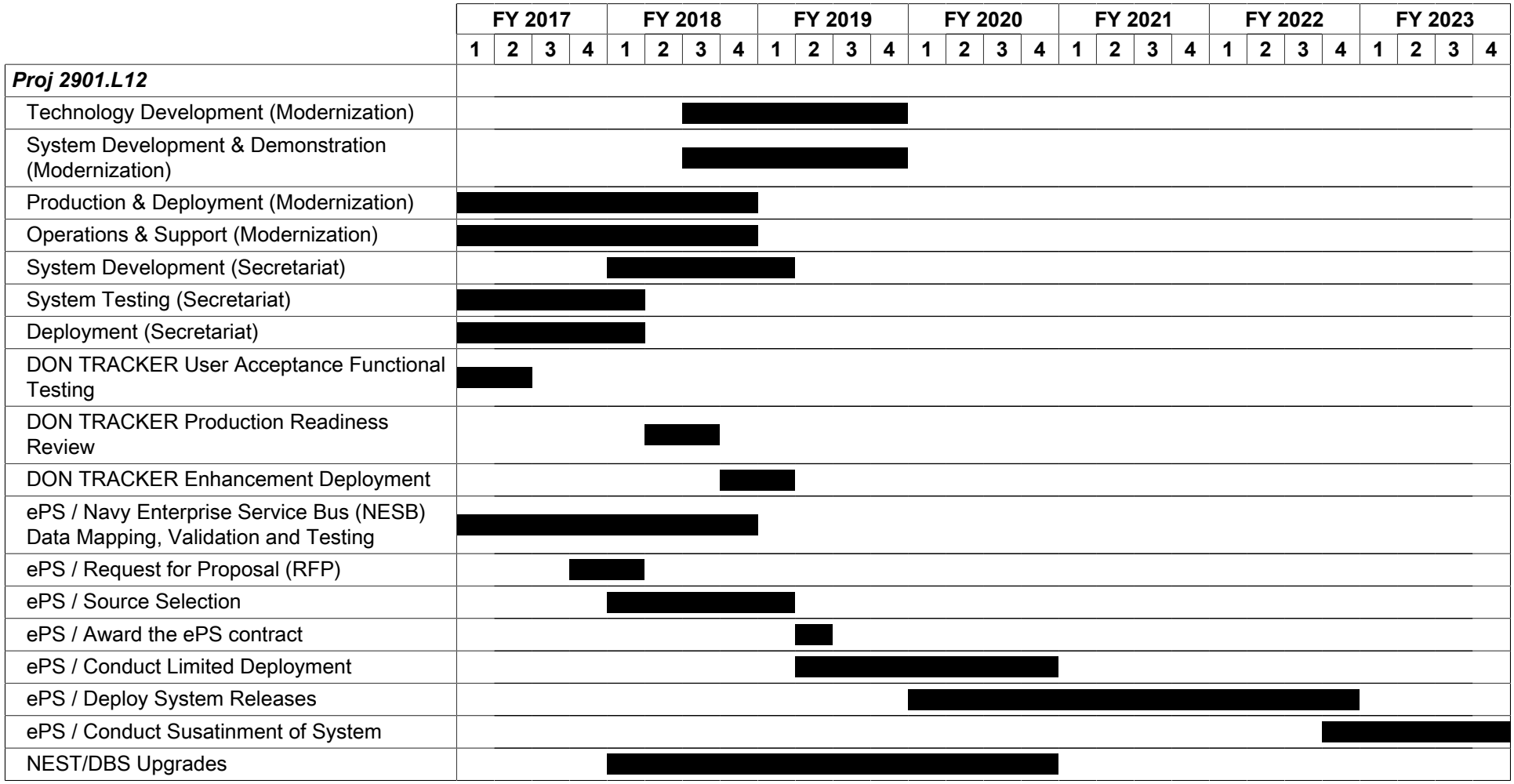

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2901 / *AAUSN IT*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2901.L12				
Technology Development (Modernization)	3	2018	4	2019
System Development & Demonstration (Modernization)	3	2018	4	2019
Production & Deployment (Modernization)	1	2017	4	2018
Operations & Support (Modernization)	1	2017	4	2018
System Development (Secretariat)	1	2018	1	2019
System Testing (Secretariat)	1	2017	1	2018
Deployment (Secretariat)	1	2017	1	2018
DON TRACKER User Acceptance Functional Testing	1	2017	2	2017
DON TRACKER Production Readiness Review	2	2018	3	2018
DON TRACKER Enhancement Deployment	4	2018	1	2019
ePS / Navy Enterprise Service Bus (NESB) Data Mapping, Validation and Testing	1	2017	4	2018
ePS / Request for Proposal (RFP)	4	2017	1	2018
ePS / Source Selection	1	2018	1	2019
ePS / Award the ePS contract	2	2019	2	2019
ePS / Conduct Limited Deployment	2	2019	4	2020
ePS / Deploy System Releases	1	2020	4	2022
ePS / Conduct Susatinment of System	4	2022	4	2023
NEST/DBS Upgrades	1	2018	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy										Date: February 2018		
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 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
2903: *NAVAIR IT*	9.689	5.157	10.915	19.144	-	19.144	19.833	7.818	5.660	2.315	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Configuration Management Information System (JCMIS): The JCMIS Program is DoD's standard software system for complete and integrated Configuration Management (CM) of weapon systems from acquisition to disposal. JCMIS efficiently manages all product structure data, including complex interrelationship between assemblies and subassemblies, technical documentation and the parts that comprise the item. JCMIS is designed to manage and control configuration data to support the DoD business processes. 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 JCMIS, as instant consistent integrated configuration data is readily available to operators, maintainers and logistics personnel. This system is a CM tool available DoD wide to support all potential customers. JCMIS provides users with a common database infrastructure to ensure compatibility, quality, and consistency of 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 JCMIS is achieved. This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it includes those projects that have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirement prior to full-rate production decision.

Task Force Cyber Awakening (TFCA)- 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 - Digital Thread (DT) is digital process integration with complete, secure and authoritative data. DT integrates the product life cycle, and includes all the processes that are needed to design, develop, test, produce, and support a product. By connecting these processes, and using a standardized set of digital tools and data, the DT accelerates the product development cycle and lowers costs for support and new capability integration.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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The Digital Thread solution also includes development and demonstration of cyber security architectures for sustainment information systems, and development of a digital manufacturing data architecture and repository.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: JCMIS Annual Software Release	0.693	0.624	0.674	0.000	0.674
Articles:	-	-	-	-	-
FY 2018 Plans: Continue development efforts associated with COTS obsolescence and evolve an open standard interface to other systems. Maintain system compliance with Section 508 requirements. Constantly evolving threats, new vulnerabilities, and changing DON Cyber Security policy require increasingly strong efforts on behalf of JCMIS to ensure that system software and architecture remain secure. Continue generation of solutions and mitigation plans for any vulnerabilities identified during system assured compliance assessment solution scans. Continue monitoring for changes and compliance with applicable security technical implementation guided checklists and security content automation protocol results. Compliance with applicable information assurance updates including information assurance vulnerability alert, information assurance vulnerability bulletin, information assurance vulnerability technical, Microsoft, and supporting software updates. Generation of timely and efficient system and/or software solutions to assist with requests that may involve modification/ update to system software/architecture.					
FY 2019 Base Plans: Maintain existing JCMIS sustainment posture. Continuing to proactively respond to evolving threats, new vulnerabilities, and changing DON Cyber Security policy to ensure adequate continued system software and architecture security posture. Comply with applicable information assurance updates including information assurance vulnerability alerts, information assurance vulnerability bulletins, information assurance vulnerability technical, Microsoft, and all supporting software updates. Continue generation of solutions and mitigation plans for vulnerabilities identified during system assured compliance assessment solution scans. Continue monitoring for changes and compliance with applicable 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. Continue timely and efficient system and/or software solutions in response to customer/fleet requests that involve modification/update to system software/architecture. Continue necessary development efforts in response to COTS obsolescence scenarios and evolve an open standard interface to other systems as required.					
FY 2019 OCO Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase due to development efforts in response to COTS obsolescence scenarios.					
Title: Task Force Cyber Awakening (TFCA)	4.464	10.291	5.372	0.000	5.372
Articles:	-	-	-	-	-
FY 2018 Plans: - Broad Agency Announcement (BAA) new awards / continuation of development, demonstration and transition of cyber security solutions across 8 identified technology areas. - Augmentation and maturation of lab capabilities across multiple NAVAIR sites to conduct Cyber security RDT&E for NAVAIR programs. - Continued development and maturation of new customized tools, methodologies, and procedures for RDT&E of control system interfaces and penetration testing that tie to identified risk assessment capability gaps and emergent threats. - Continued support of emergent FLTCYBERCOM TASKORDs requiring urgent development of customized control systems solutions for identified Fleet risks. - Increased FY18 Capability investment directly supports emergent intelligence, FCC TASKORDs, Blackbeard AAR, NDAA 1647, Aviation Resiliency and OSD DSB study. Without this capability investment the US Navy will continue to be vulnerable to attacks on its non-traditional systems (e.g., aircraft, weapons, radars, ALRE) and will result in significant residual risk to aviation combat systems. Broad Agency Announcements are in place to execute FY18 funding increases.					
FY 2019 Base Plans: - Broad Agency Announcement (BAA) new awards and continuation for the development, demonstration, and transition of cyber security solutions across 8 identified critical technology areas. - 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 and engineering investigations.					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
- Continued support of emergent Fleet Cyber Command/10th Fleet (FLTCYBERCOM/C10F) Tasking Orders (TASKORD) requiring urgent development of customized weapon and control systems solutions for identified Fleet risks. - Increased FY19 capability investment directly supports emergent intelligence, FLTCYBERCOM/C10F TASKORDs, Blackbeard After Action Report (AAR), National Defense Authorization Act (NDAA) 1647 Weapons Systems Evaluations, Aviation Resiliency, incident response investigations, 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 non-traditional systems (e.g., Aircraft, Weapons, Radars, Aircraft Launch and Recovery Equipment (ALRE)) and will result in significant residual risk to aviation combat systems. Broad Agency Announcements are in place to execute FY19 funding increases. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** FY2018-FY2019 decrease NAWC Support in development aviation weapon systems customized tools, methodologies, and procedures.					
Title: Digital Thread	0.000	0.000	13.098	0.000	13.098
Articles:	-	-	-	-	-
FY 2018 Plans: N/A ***FY 2019 Base Plans:*** Establish a production capability to provide maintainers access to the correct digital Configuration Managed Information for faster and more accurate on site execution and to allow for an increase in Readiness managed within the Fleet Community. Utilize a combination of digital demonstration efforts that have been ongoing at Commander Fleet Readiness Centers and Naval Air Warfare Center Aircraft Division to extend those capabilities into a cohesive solution that has implications for I-Level maintainers and serves as a baseline for O-Level engagement. Develop cyber security/data architectures and repository for digital manufacturing data. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:***					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Increase to Digital Thread to establish a production capability to provide maintainers access to the correct Configuration Managed Information for more accurate on site capability enablement and allow for the increase in Readiness managed within the Fleet Community.					
Accomplishments/Planned Programs Subtotals	5.157	10.915	19.144	0.000	19.144

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The Joint Configuration Management Information System (JCMIS) 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 to continue evolving JCMIS. The JCMIS Program Manager continues to evolve the program to keep pace with cost, Military Standards, and evolving commercial standards. Various contractors using competitively awarded contracts have supported the program. Currently, Intergraph Corporation is the JCMIS integration contractor selected through a GSA contract.

Task Force Cyber Awakening (TFCA) - The TFCA 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

2. Stand-up Advanced Cyber Lab (ACL)

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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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. Stand-up capability to assess BAA solutions. 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
1) Develop cyber security architecture standards for NAE Digital Thread including demonstration plan
2) Develop and demonstrate digital manufacturing data architecture standards that support digital manufacturing capabilities including design, manufacturing, and materials data.
3) Execute cyber security demonstrations for NAE Digital Thread including COMFRC, Logistics IT, PMAs
4) Stand up developmental digital manufacturing data repository that can be integrated into COMFRC, Logistics IT , and PMA systems

E. Performance Metrics

Joint Configuration Management Information System (JCMIS) - Milestone C Spiral Development:
1. During the life of the contract verify conformance with agency specific information processing standards and functional requirements. Prior to delivery of enhanced software, demonstrate the operational capability of the system software. Functionality of the software must meet required systems architecture and processing capabilities. All requirements mandated by law or regulation must be 100% compliant. Independent Verification and Validation will be used for testing new releases of software to determine that previous functionality is maintained. Customer satisfaction will be measured through limited validated customer complaints, feedback, and surveys.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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Task Force Cyber Awakening (TFCA):
1. Establish Broad Agency Announcements (BAA) for Resilient Cyber Warfare Capabilities for Naval Air Systems Command Weapon Systems: Receive responses that address at key areas of interest.
2. Stand-up Advanced Cyber Lab: Operating capability workstations and inter agency task team.
3. Organic Cyber Solutions for NAVAIR Control Systems: Complete all projects.

Digital Thread:
During execution of the funding the following will be used to validate the performance:
1) Contract performance to plan and on time delivery of all contract deliverables
2) Completion of NAE Digital Thread environment Standup FY16-FY18
3) Execution of NAE Digital Thread Demonstrations
4) Execution of Digital Thread Cyber Security architecture demonstrations
5) Standup of developmental digital manufacturing data repository

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Solutions for Cyber Warfare Capabilities for Task Force Cyber Awakening	Various	Various : Various	4.725	3.294	Oct 2016	4.200	Oct 2017	2.147	Oct 2018	-		2.147	Continuing	Continuing	Continuing
Solutions for Digital Thread	Various	Various : Various	0.614	0.000		0.000		9.500	Oct 2018	-		9.500	Continuing	Continuing	Continuing
		Subtotal	5.339	3.294		4.200		11.647		-		11.647	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Support for Joint Configuration Management Information System (JCMIS)	C/FFP	NAVSUP : Mechanicsburg, PA	1.869	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Software Support for Joint Configuration Management Information System (JCMIS)	C/FFP	Wyle : Lexington Park, MD	0.313	0.549	Mar 2017	0.480	Mar 2018	0.506	Mar 2019	-		0.506	Continuing	Continuing	Continuing
		Subtotal	2.182	0.549		0.480		0.506		-		0.506	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support for Joint Configuration Management Information System (JCMIS)	WR	NAWCAD : Patuxent River, MD	0.781	0.144	Dec 2016	0.147	Dec 2017	0.168	Dec 2018	-		0.168	Continuing	Continuing	Continuing
Systems Engineering Support for Task Force Cyber Awakening	WR	NAWCAD : Patuxent River, MD	1.100	1.170	Oct 2016	3.438	Oct 2017	1.937	Oct 2018	-		1.937	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*	Project (Number/Name) 2903 / *NAVAIR IT*	

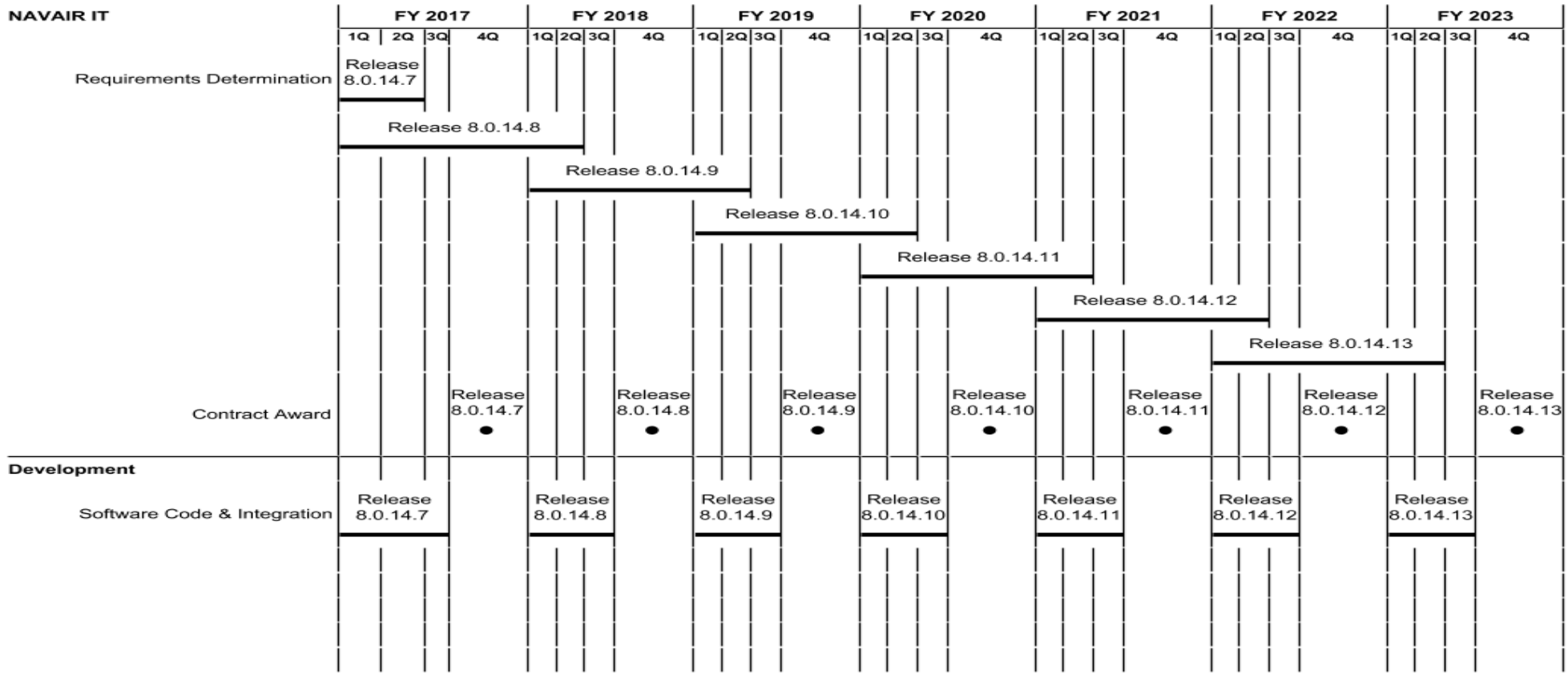
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering Support for Digital Thread	WR	NAWCAD : Patuxent River, MD	0.287	0.000		0.000		3.526	Oct 2018	-		3.526	Continuing	Continuing	Continuing
Systems Engineering Support for Task Force Cyber Awakening	WR	NAWCWD : China Lake, CA	0.000	0.000		2.650	Oct 2017	1.360	Oct 2018	-		1.360	Continuing	Continuing	Continuing
		Subtotal	2.168	1.314		6.235		6.991		-		6.991	Continuing	Continuing	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	9.689	5.157		10.915		19.144		-		19.144	Continuing	Continuing	N/A

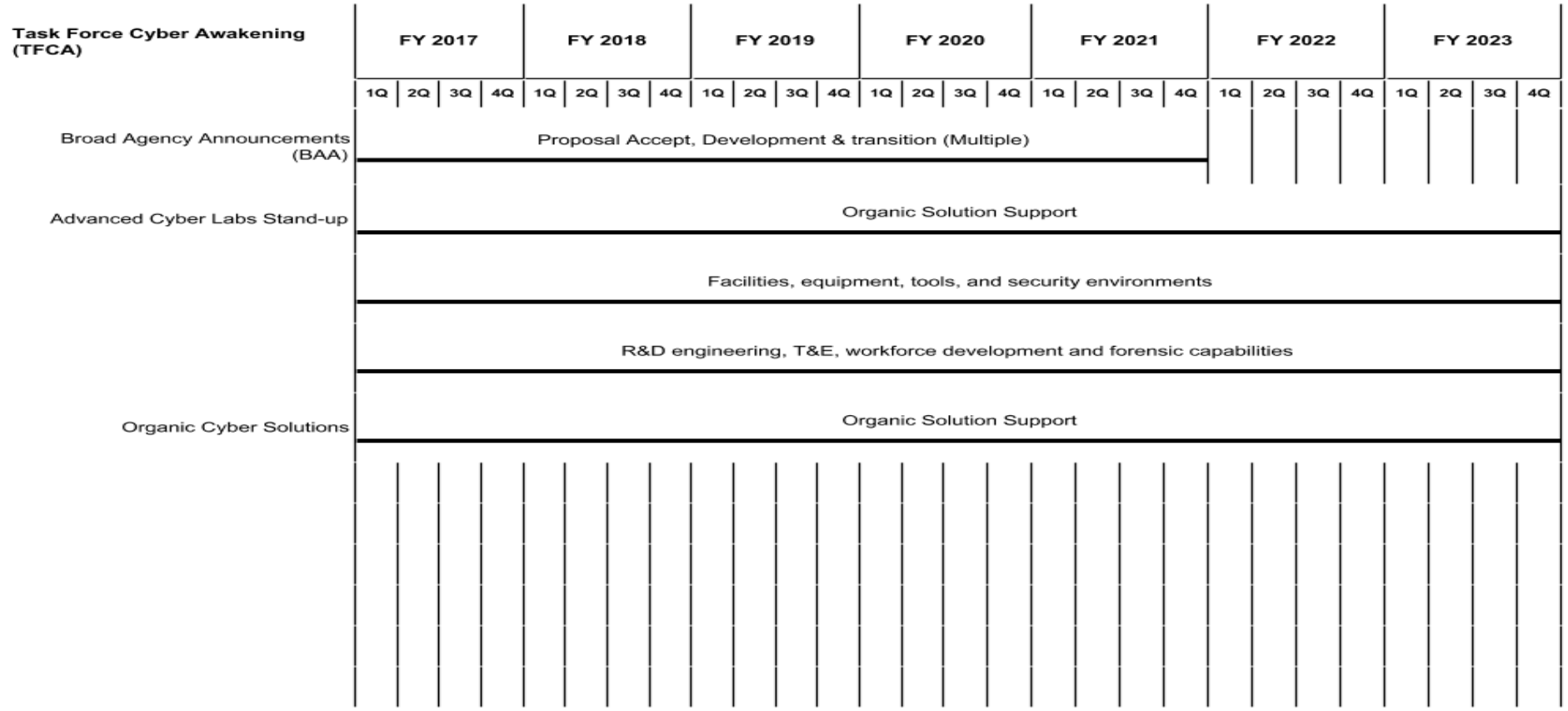
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*



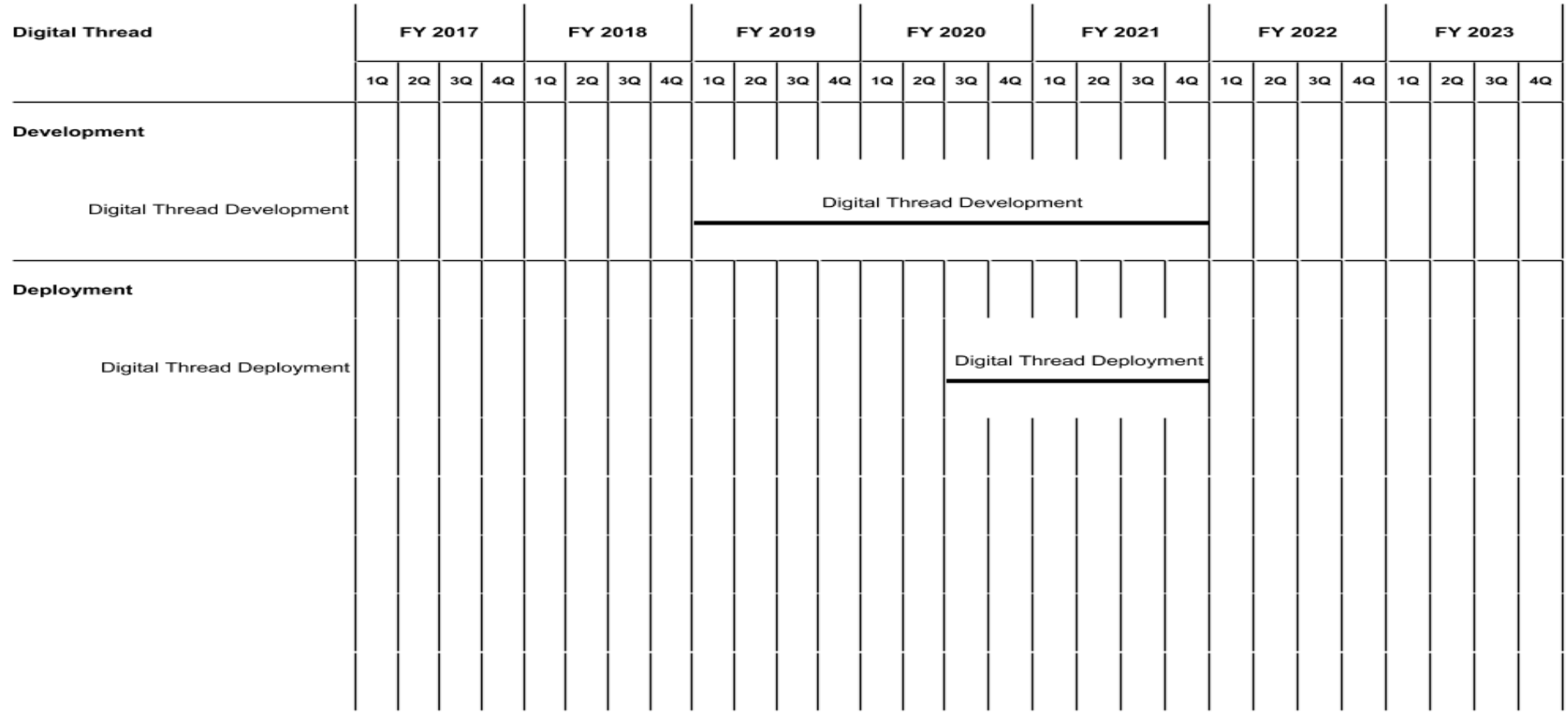
2019OSD - 0605013N - 2903

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*



2019OSD - 0605013N - 2903

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2903 / *NAVAIR IT*



2019OSD - 0605013N - 2903

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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 8.0.14.7	1	2017	2	2017
Requirements Determination: Release 8.0.14.8	1	2017	2	2018
Requirements Determination: Release 8.0.14.9	1	2018	2	2019
Requirements Determination: Release 8.0.14.10	1	2019	2	2020
Requirements Determination: Release 8.0.14.11	1	2020	2	2021
Requirements Determination: Release 8.0.14.12	1	2021	2	2022
Requirements Determination: Release 8.0.14.13	1	2022	2	2023
Contract Award: Contract Award, Release 8.0.14.7	4	2017	4	2017
Contract Award: Contract Award, Release 8.0.14.8	4	2018	4	2018
Contract Award: Contract Award, Release 8.0.14.9	4	2019	4	2019
Contract Award: Contract Award, Release 8.0.14.10	4	2020	4	2020
Contract Award: Contract Award, Release 8.0.14.11	4	2021	4	2021
Contract Award: Contract Award, Release 8.0.14.12	4	2022	4	2022
Contract Award: Contract Award, Release 8.0.14.13	4	2023	4	2023
Development: Software Code & Integration: Release 8.0.14.7	1	2017	3	2017
Development: Software Code & Integration: Release 8.0.14.8	1	2018	3	2018
Development: Software Code & Integration: Release 8.0.14.9	1	2019	3	2019
Development: Software Code & Integration: Release 8.0.14.10	1	2020	3	2020
Development: Software Code & Integration: Release 8.0.14.11	1	2021	3	2021
Development: Software Code & Integration: Release 8.0.14.12	1	2022	3	2022
Development: Software Code & Integration: Release 8.0.14.13	1	2023	3	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Task Force Cyber Awakening (TFCA)				
Broad Agency Announcements (BAA): Proposal Acceptance, Development & transition (Multiple)	1	2017	4	2021
Advanced Cyber Labs Stand-up: Support Organic/BAA/industry solutions	1	2017	4	2023
Advanced Cyber Labs Stand-up: Facilities, equipment, tools, and security environments	1	2017	4	2023
Advanced Cyber Labs Stand-up: R&D engineering, T&E, workforce development and forensic capabilities	1	2017	4	2023
Organic Cyber Solutions: control systems solution development and evaluation	1	2017	4	2023
Digital Thread				
Development: Digital Thread Development: Digital Thread Development	1	2019	4	2021
Deployment: Digital Thread Deployment: Digital Thread Deployment	3	2020	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
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COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
2904: *NAVSEA IT*	155.226	26.018	64.233	37.855	-	37.855	22.613	20.663	11.934	16.134	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Navy Maritime Maintenance Enterprise Solution (NMMES) is the Information Technology 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), 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 $6.5B of ships 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 Audit Improvement 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 systems, 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 legacy systems to the next generation of centrally hosted tools supporting Fleet Maintenance systems for the Navy.

The NMMES-TR program and budget was moved to new PU 3432 within PE 0605013N starting in FY 2019 as a result of designation as a Business System Category 1 acquisition program.

Funding for NMMES PU 2904 addresses critical deficiencies and minimizes the inherent risks that a catastrophic systems failure would be to fleet readiness. The increase in funds is required to support the modernizations of products that are on outdated software and to 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 increase. 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 systems until spiral deployment of the NMMES Technical Refresh (TR) solution. The Workforce Management and Financial Management systems were removed from the NMMES TR scope by the Analysis of Alternative (AoA) Preferred Alternative, and will continue operation and sustainment as part of the NMMES portfolio. There is an overlapping period of time where both solutions are operating and requiring sustainment, hence the increase in the requested amounts for current systems and subsequent replacement system(s). The NMMES-TR program and budget was moved to new PU 3432 starting in FY 2019 as a result of designation as a Business System Category 1 acquisition program.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Project Sequencing & Scheduling (PSS) Upgrade	0.500	2.500	1.000	0.000	1.000

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Articles:	-	-	-	-	-
Description: The PSS scheduling system 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 CNO availabilities and other maintenance, repair and overhaul work assigned to the activities. 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 1980s 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 interrupted 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. The PSS Upgrade will convert the system from the Robbins-Gioia CAT proprietary solution to the Robbins-Gioia Jaguar 2020 (J2020) solution and improve the web-basing of the system. ***FY 2018 Plans:*** Complete the Scheduling Improvement Analysis to insure that the design modifications required for the J2020 product fully align with the other NMMES Family of Systems and is compliance with NEDC requirements. Following the completion of analysis perform the necessary software configuration and integration of the J2020 product with the NMMES Family of Systems and begin Government Acceptance Testing (GAT) of the product. ***FY 2019 Base Plans:*** Complete GAT of the product and conduct implementation and training of the user community in the use of the PSS Upgrade. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding decrease reflects project deployment schedule.					
Title: electronic Technical Work Document (eTWD)	12.602	10.500	7.031	0.000	7.031
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Description: The eTWD Initiative is a NAVSEA Sponsored, 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 NMMES Family of Systems supporting ship maintenance. The interactive electronic work instruction will be used at the jobsite replacing the current paper driven 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 accessible for problem resolution. The eTWD Initiative is in progress. ***FY 2018 Plans:*** Complete the software development and configuration of the eTWD capability. Conduct formal Government Acceptance Testing of the software and validate that the changes made to the current solution are acceptable and working properly. ***FY 2019 Base Plans:*** Complete the pre-deployment planning and training necessary to begin implementation in a Naval shipyard. Following stabilization of eTWD operation of first naval shipyard deployment, continue implementation at the remaining naval shipyards. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding decrease reflects project deployment schedule.					
Title: Planned Maintenance System (PMS) Upgrade	0.644	3.128	1.309	0.000	1.309
Articles:	-	-	-	-	-
Description: The Planned Maintenance System Management Information System (PMSMIS) is a web solution that tracks the status of all Maintenance Index Pages (MIPs) and Maintenance Requirements Cards (MRCs) including new and revised documentation, allows 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 Maintenance (RCM) information and other data needed to support all forms of planned maintenance in the Fleet. The existing process requires					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
excessive sailor and shore expert administrative burden, creates complex and ambiguous documents that can be difficult to follow, takes too long to implement changes, leads to equipment maintenance not being properly executed, and lacks tools for leadership to monitor program implementation and assure satisfactory performance. Furthermore, the existing process does 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 also provide visibility to shore maintenance leaders to ensure equipment is consistently scheduled throughout the fleet and to identify execution issues. ***FY 2018 Plans:*** Complete detailed market analysis, and begin design appraisals to align replacement solution with other maintenance products. Begin acquisition and software development. ***FY 2019 Base Plans:*** Complete software design and/or configuration of PMS Upgrade and conduct Government Acceptance Testing (GAT), while planning for deployment and implementation. Once deemed acceptable, begin user community training aligned with implementation and deployment plan. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding decrease reflects project deployment schedule.					
Title: Strategic Planning &Forecasting (SPF) Upgrade	0.103	4.000	1.755	0.000	1.755
Articles:	-	-	-	-	-
Description: SPF is part of a suite of tools in the NMMES Family of Systems 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 systems; 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 systems have known software deficiencies which limit productivity and require cumbersome manual workarounds. 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.					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
The SPF Upgrade is part of the Service Life Extension that will address the accumulation of significant problems with this system, 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 systems 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. ***FY 2018 Plans:*** Begin systems analysis and market research to determine the extent of mature commercial technologies that meet Upgrade requirements. Alignment the SPF Upgrade with NMMES Family of Systems and begin development/configuration of the product. ***FY 2019 Base Plans:*** Complete development and configuration of Upgrade, and begin Government Acceptance Testing of SPF Upgrade in preparation for FY19 deployment and implementation. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding decrease reflects project deployment schedule.					
Title: NMMES Technical Refresh (NMMES-TR)	9.684	25.200	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: Funding was moved to PU 3432 of PE 0605013N starting in FY19. The current Navy Maritime Maintenance Enterprise Solution (NMMES) toolset enables the execution of submarine, aircraft carrier, and surface ship maintenance and repair for the Naval Shipyards (NSY), Intermediate Maintenance Facilities (IMF), Regional Maintenance Centers (RMC), and Ship Repair Facilities (SRF). It consists of a family of systems and applications that are at (or nearing) their end-of-life. These systems and applications support a workforce of over 51,000 worldwide and enable approximately $9.5B per year					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
of maintenance and repair work. The Workforce Management and Financial Management systems were removed from the NMMES TR scope by the Analysis of Alternative (AoA) Preferred Alternative, and will continue operation and sustainment as part of the NMMES portfolio. The critical business processes to schedule, execute, monitor, certify work, and pay employees at each activity are codified within the Information Technology (IT) toolset; there is no manual alternative. Annual efforts to restore the NMMES budgets to meet requirements have only been partially successful and have required multiple annual supplemental actions to address deficiencies. The urgency to modernize these systems has grown every year as deferred upgrades and underfunded sustainment has led to the current state of the NMMES toolset. The NMMES-TR is a pre-Milestone A acquisition program that will provide a sustainable enterprise IT solution leveraging Commercial, Off-The-Shelf (COTS) technology and business processes for shore maritime maintenance, which also standardizes processes and tools. Unlike the uniquely custom designed status quo toolset, the NMMES-TR solution will not implement product customization to match the current maintenance business processes; but rather, maintenance business processes will be modified to match the 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. The actual solution will be formed after the Analysis of Alternatives (AoA). ***FY 2018 Plans:*** NMMES-TR in FY18 will accomplish the following work increments: 1) Completion of the design and development of a Work Brokering solution. This solution addresses both public and private yards for ship maintenance requirements and ship class maintenance plans that are then screened into maintenance availability projects for individual platforms - and then brokered to a maintenance activity for accomplishment based on available capabilities; 2) Conduct the design architecture, systems engineering, configuration and delivery of an Enterprise Services Bus (ESB) network/interfacing environment to provide for the support and transition from the NMMES solution to the NMMES-TR solution; 3) Conduct the planning and preparation for the acquisition (including releasing a Request for Proposal), the configuration, and the deployment of a Maintenance, Repair, and Overhaul (MRO) replacement solution TR					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
increment. The schedule of this increment has been aligned with the Work Brokering solution and the ESB environment. ***FY 2019 Base Plans:*** Funding for this requirement has been realigned to PU 3432 beginning in FY 2019. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding was moved to PU 3432 of PE 0605013N starting in FY19.					
Title: Financial Technical Upgrade	0.000	4.910	3.590	0.000	3.590
Articles:	-	-	-	-	-
Description: The NMMES Family of Systems has two primary systems that are financial feeders; 1) SYMIS Mission Funded COST (aka COST) system 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 system which manages the Time & Attendance data from the NMMES Family of Systems to the Defense Civilian Payroll System (DCPS). These systems 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 2018; 3) both these systems 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 system 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 systems 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 immediately transition these systems to a non-COBOL solution than to continue in the current licensing structure. Hence, the Financial Technical Upgrade is to address these four urgent needs in order to continue operation of the NMMES Family of Systems beyond 2018. ***FY 2018 Plans:*** Complete development of the SABRS interface and conduct Government Acceptance Testing (GAT). Deploy and conduct training to the user community to effectively use the SABRS tool in conjunction with the NMMES ship maintenance toolset before the beginning of FY19. Complete and deploy the FISCAM improvements and					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
FIAR requirements necessary to meet financial auditability. Complete feasibility assessment to address COBOL alternatives. Conduct the software development necessary to transition both the COST & PPPP systems to be non-COBOL solutions. ***FY 2019 Base Plans:*** Complete the software development for the modernized COST & PPPP systems, and begin planning for GAT. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding decrease reflects project deployment schedule.					
Title: Material Management Upgrade	1.000	5.250	4.750	0.000	4.750
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). Over the past 5 years, NAVSEA 08 and the Corporate Material Process Action Team through multiple LEAN events has 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					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
the current handhelds are no longer available for purchase. These deficiencies will be addressed in the Material Management Upgrade. ***FY 2018 Plans:*** Conduct initial design analysis and market research of current technologies. Complete assessment of handheld scanner alternatives insuring that the selected replacement handheld meets NAVSEA 08 cyber security requirements. ***FY 2019 Base Plans:*** Conduct software development efforts and begin Government Acceptance Testing (GAT) of the developed solution. Conduct Integration testing to insure the planned solution satisfactorily integrates with the NMMES Family of Systems. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding decrease reflects project deployment schedule.					
Title: NMMES -- Maritime Systems Environment (MSE) -- Database Optimization	1.485	3.800	3.205	0.000	3.205
Articles:	-	-	-	-	-
Description: The NMMES Family of Systems is presently undergoing a Service Life Extension (SLE) to address cyber security deficiencies, consolidate and align databases across multiple data instances, and to transition the solution into an approved Navy Enterprise Data Center. Once the transition to the NEDC is complete and has reached stability the Database will be optimized to gain throughput efficiencies, capitalize of economies of scale, rationalize data structures to streamline the use of authoritative data and to provide standardized access to data across the fleet maintenance enterprise. ***FY 2018 Plans:*** Begin analysis and design of database structure and establish database configuration parameters. ***FY 2019 Base Plans:*** Complete database structuring and begin Government Acceptance Testing and independent validation of database performance. ***FY 2019 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding decrease reflects project deployment schedule.					
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. ***FY 2018 Plans:*** Conduct advanced planning for Workforce Management Update including revalidation of requirements. Conduct initial design analysis and market research of current technologies. Begin software development and integration with NMMES; begin product deployment. ***FY 2019 Base Plans:*** Finalize software development and integration with NMMES; continue training and deployment to users at the Naval Shipyards and Regional Maintenance Centers. Gain Product stabilization by addressing user feedback and identified software deficiencies. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding decrease reflects project deployment schedule.	0.000 -	2.700 -	2.000 -	0.000 -	2.000 -
Title: Local Application Rationalization ***Articles:*** ***Description:*** Rationalize and down select to a subset of applications after assessing local applications in the shipyards and RMCs. Down-select to a common core set and standardize the functionality across the enterprise. There are numerous local applications at the shipyard that need to be rationalized into several "best of breed" as the Maritime Systems Environment (MSE) is deployed. This requires reviewing all local application functionality and determining which applications should be migrated.	0.000 -	2.245 -	3.000 -	0.000 -	3.000 -

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
FY 2018 Plans: Begin analysis and rationalization of local applications. Assess best of breed and designate top application as the standard enterprise selection. Begin planning and design for integration into NMMES. Review and implement cyber security changes required to host these applications at the Navy Enterprise Data Center (NEDC). ***FY 2019 Base Plans:*** This project is phased over two years. Funding increase reflects the tasks planned for execution. Tasks include; configuring and beginning Government Acceptance Testing of integration of best of breed selections with NMMES, training users and deploying to at the Naval Shipyards and Regional Maintenance Centers. Gain Product stabilization by addressing user feedback and identified software deficiencies. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Project funding increased to requirement based on available resources.					
Title: MSE Waterfront Process Improvement	0.000	0.000	1.000	0.000	1.000
Articles:	-	-	-	-	-
Description: The Maritime Systems Environment (MSE) Waterfront Processes Improvement Upgrade is focused on accelerating LEAN process improvement recommendations from industrial Process Action Teams into the embedded processes contained in the MSE. 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 development of additional process improvements to gain further economies in the maintenance community. ***FY 2018 Plans:*** N/A. ***FY 2019 Base Plans:*** Prioritize mature LEAN finding based on best return on investment and begin analysis for integration into MSE. Structure improvements into series of Releases aligned with the MSE regular update cycle in order to accelerate delivery of capability to users. ***FY 2019 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Initial project planned to start in FY 2019 based on program funding and technical plans.					
Title: Enterprise Data Analytics ***Articles:*** ***Description:*** Establish capability to fully utilize navy authoritative maintenance data to develop predictive analysis and gain efficiencies in ship availabilities. ***FY 2018 Plans:*** N/A. ***FY 2019 Base Plans:*** Finalize functional and business process analysis and market analysis of commercial products. Select commercial package(s) and begin configuration and integration planning. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Initial project planned to start in FY 2019 based on program funding and technical plans.	0.000 -	0.000 -	2.000 -	0.000 -	2.000 -
Title: Product Data Management Integration ***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 Systems 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 2018 Plans:***	0.000 -	0.000 -	6.410 -	0.000 -	6.410 -

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
N/A. ***FY 2019 Base Plans:*** Begin analysis and integration planning of the selected tool with NAVSEA PEOs and shipbuilders. Configure the new tool and integrate with the NMMES product line. Perform software testing and train users at the Naval Shipyards. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Initial project planned to start in FY 2019 based on program acquisition schedules of Ford Class Carrier and Columbia Class Submarine Programs.					
Title: Mobility Solutions ***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 2018 Plans:*** N/A. ***FY 2019 Base Plans:*** Begin analysis and planning, including security considerations. Begin device integration and capability demonstrations. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Initial project planned to start in FY 2019 based on program funding and technical plans.	0.000 -	0.000 -	0.805 -	0.000 -	0.805 -
Accomplishments/Planned Programs Subtotals	26.018	64.233	37.855	0.000	37.855

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

The backbone of the present solution is a set of dated information technology (IT) products that are approaching end-of-life. In order to ensure that the IT toolset would continue 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 systems; and to transition this solution to a more modern and efficient end state. Selected systems modernizations are aligned with ongoing systems sustainment to provide an IT solution until a Commercial of the Shelf (COTS) based Technical Refresh of this solution can be completed and deployed. Existing IT contracts will be used for sustainment services and new contracts will be put in place to support NMMES TR services, utilizing existing delivery orders where feasible.

E. Performance Metrics

System performance is measured using the following:
A. Operational Availability (A_o): Percent of time systems are available for use.
(1) Mean Down Time (MDT) is the mean time the system will be down to start and complete maintenance and corrective task.
MDT = (Total Down Time)/(Total Number of Maintenance). Measure of Performance (MOP): Total Down Time ? 87.6 Hrs/Year.
(2) Mean Time Between Maintenance (MTBM) is the mean time between maintenance, all corrective and preventive maintenance. MTBM = (Total Up Time)/(Total Number of Maintenance). MOP: A_o = MTBM / (MTBM+MDT) > 0.99.
B. Reliability: Ability of a system to perform its mission without failure or degradation under a prescribed set of operating conditions.
(1) Mean Time Between Failure (MTBF) is the mean time between unforeseen system failures which result in substantial loss in users' productivity, including being off-line unscheduled. MTBF = (Total Up Time)/(Total Number of Failures). MOP: MTBF > 3504 Hours
(2) Mean Time To Repair (MTTR) is the mean time to perform the corrective maintenance to repair the failure. MTTR = (Total Down Time for corrective maintenance)/(Total Number of Failures). MOP: MTTR less than or equal to 16 Hours.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	C/CPFF	NAVSEA : WNY, D.C.	119.936	16.334	Dec 2016	39.033	Oct 2017	37.855	Oct 2018	-		37.855	Continuing	Continuing	Continuing
Software Development	WR	NSLC : Mechanicsburg, PA	15.999	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Advance Planning Analysis	WR	SPAWAR : Arlington, VA	7.471	0.000		0.000		0.000		-		0.000	0.000	7.471	-
Advance Planning Analysis	TBD	NAVSEA : WNY, D.C.	6.820	9.684	Dec 2016	25.200	Nov 2017	0.000		-		0.000	0.000	41.704	-
Advance Planning Analysis	TBD	NSWC PHD : Port Hueneme, CA	5.000	0.000		0.000		0.000		-		0.000	0.000	5.000	-
		Subtotal	155.226	26.018		64.233		37.855		-		37.855	Continuing	Continuing	N/A

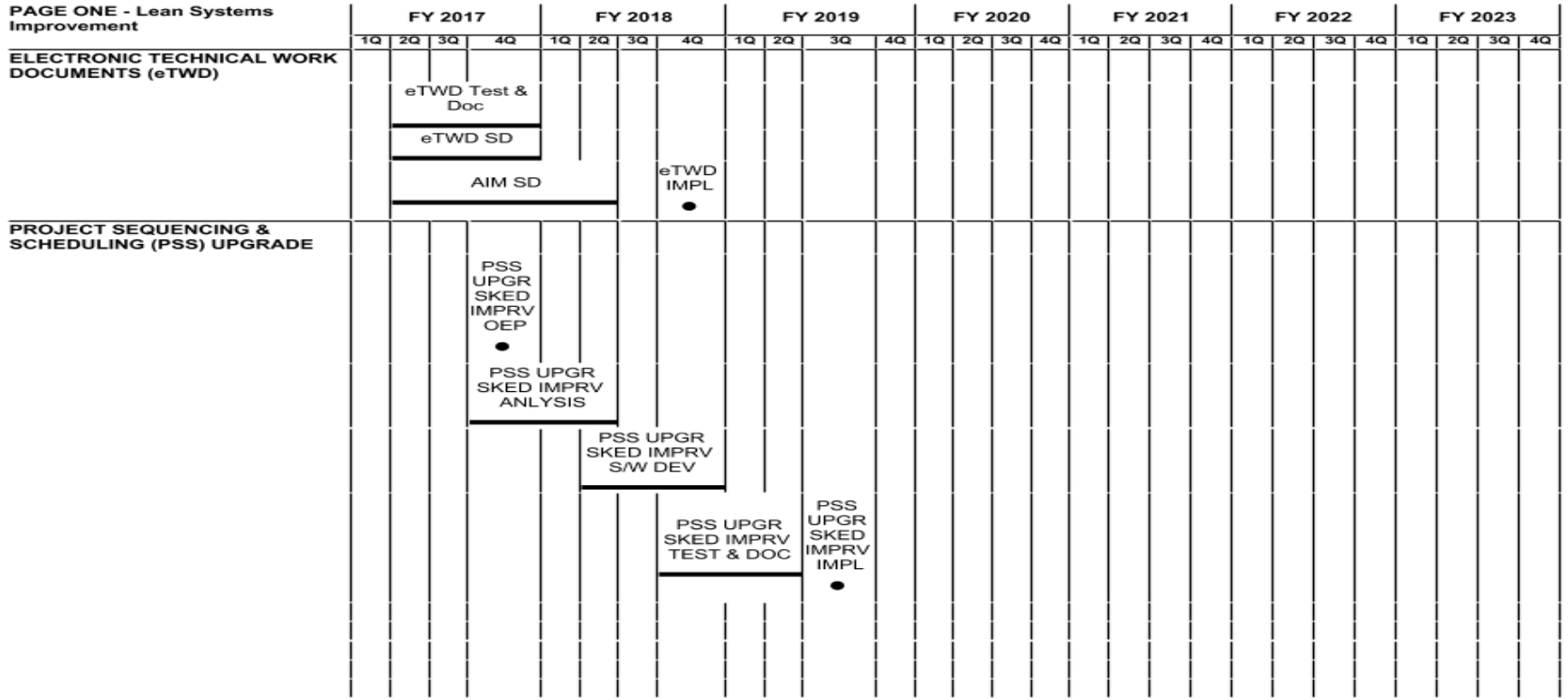
Remarks

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 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	155.226	26.018		64.233		37.855		-		37.855	Continuing	Continuing	N/A

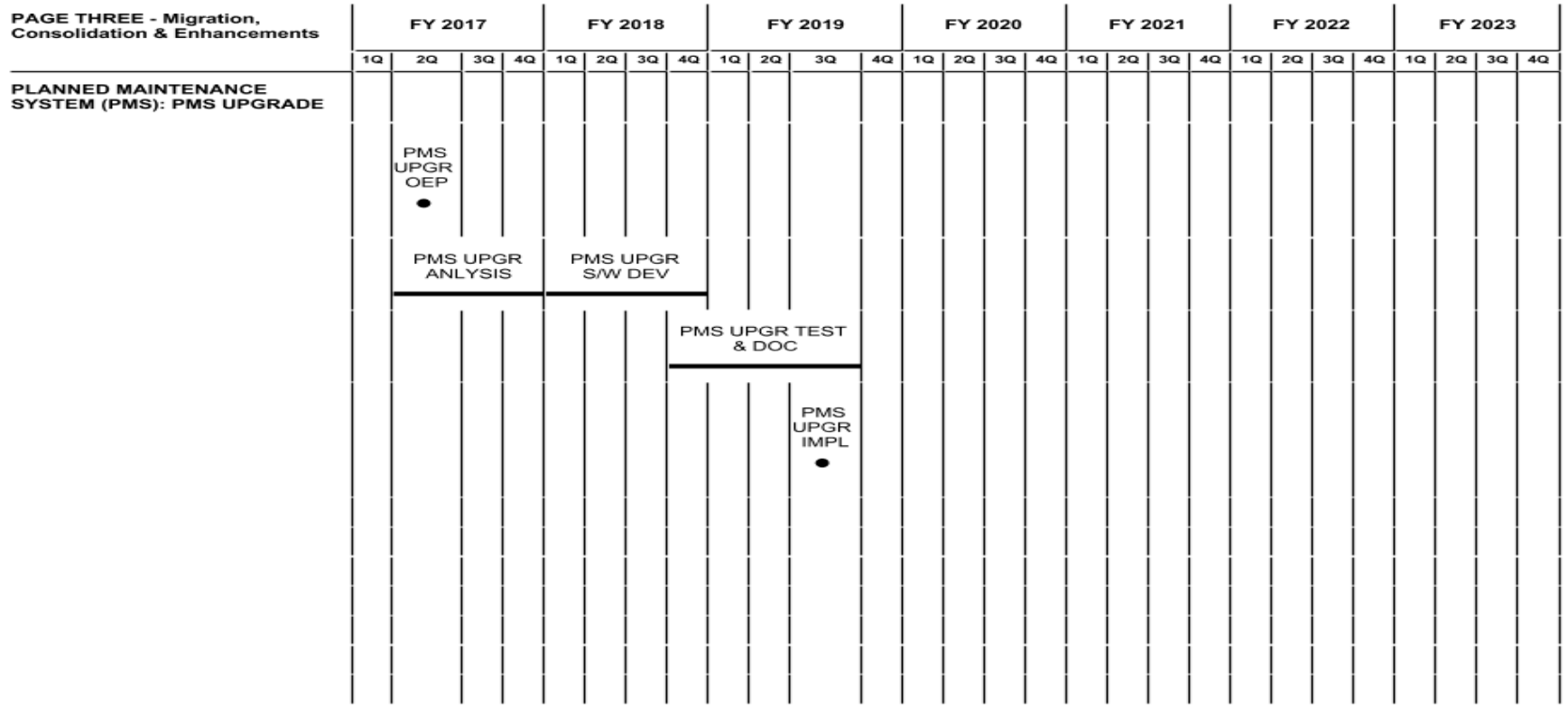
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*



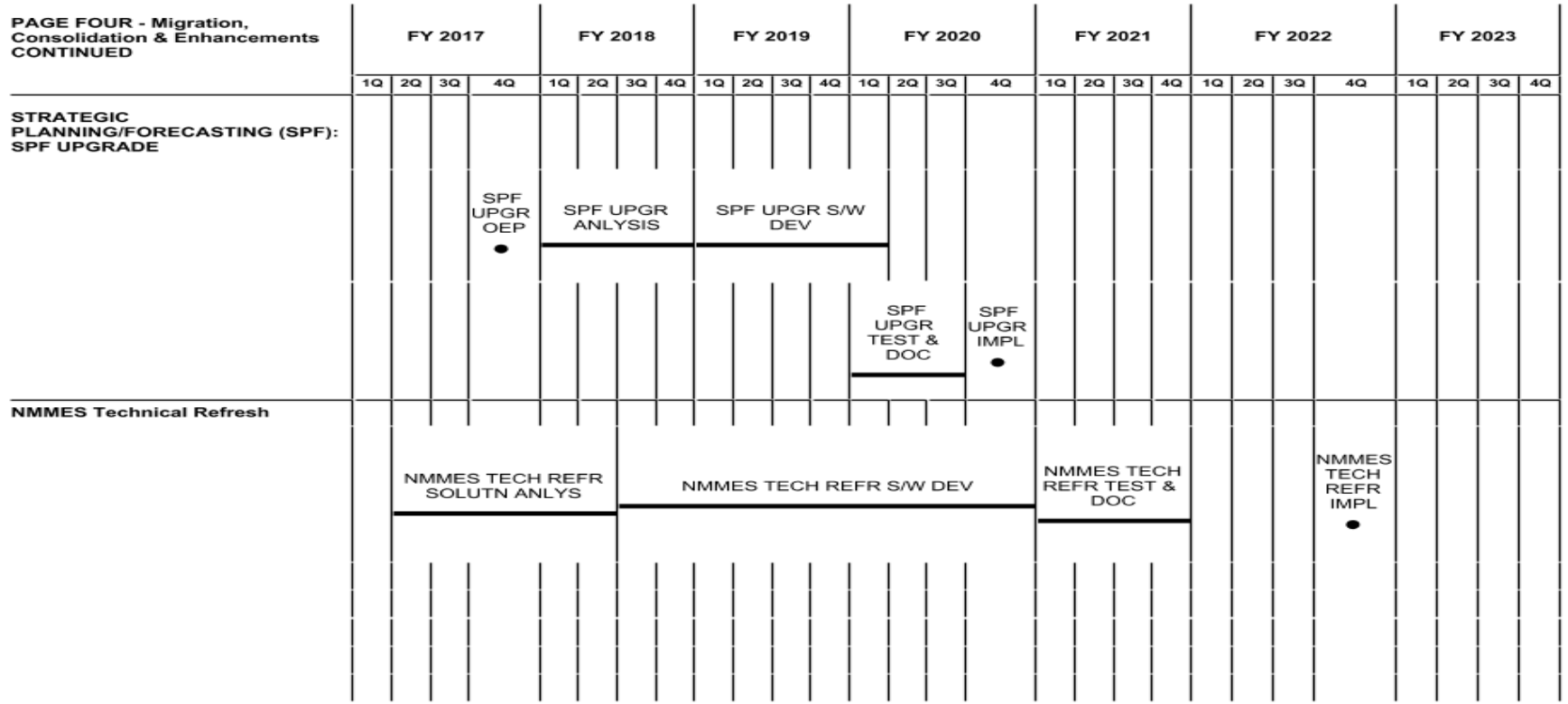
2019DON - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*



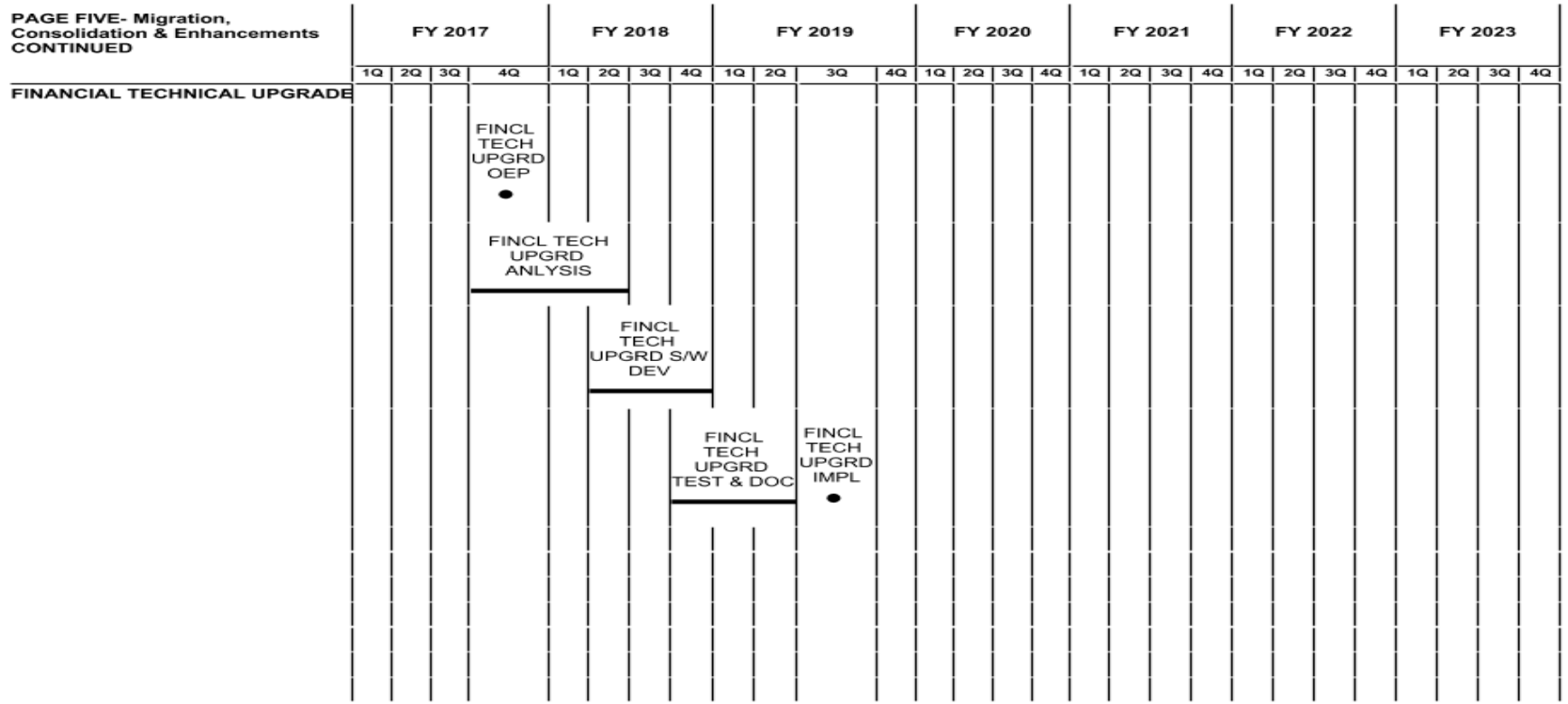
2019DON - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*



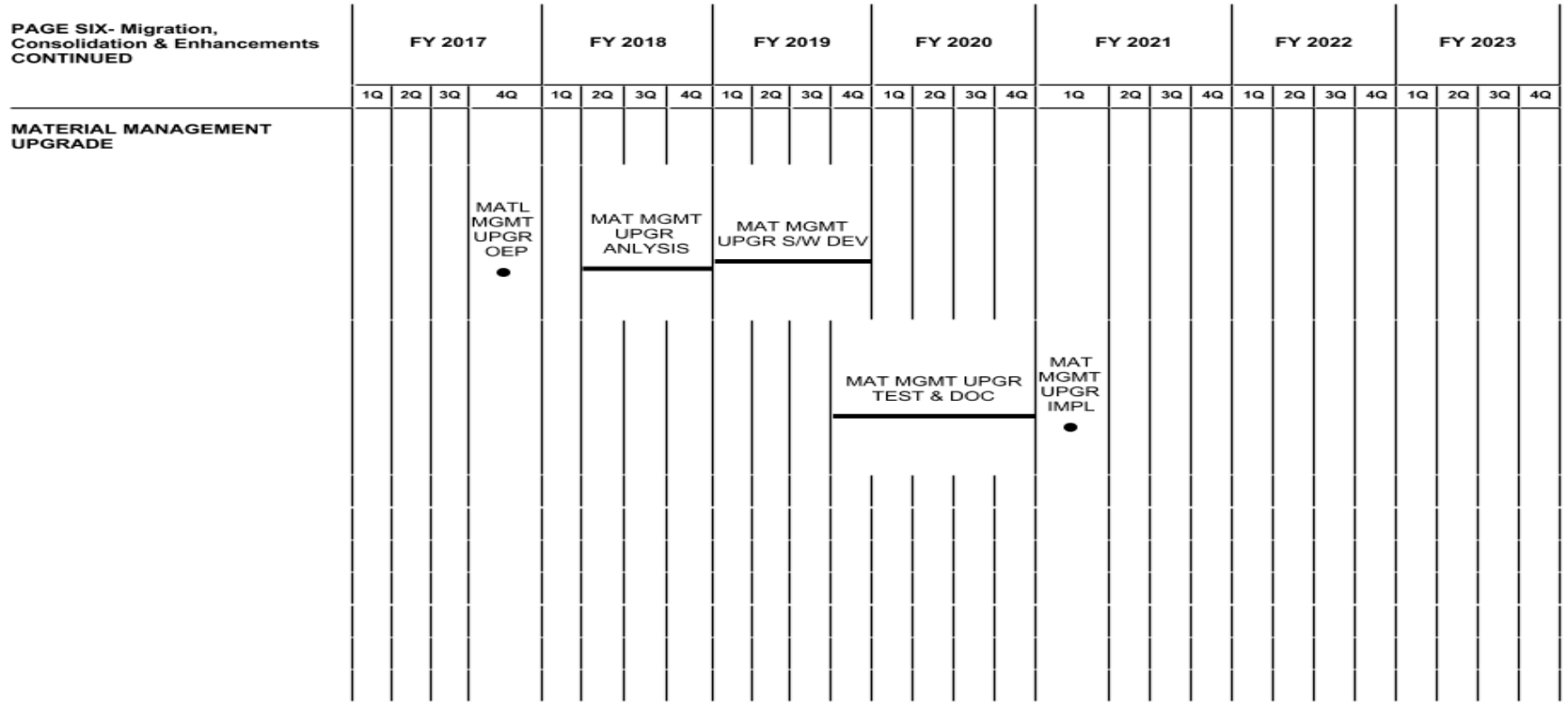
2019DON - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*



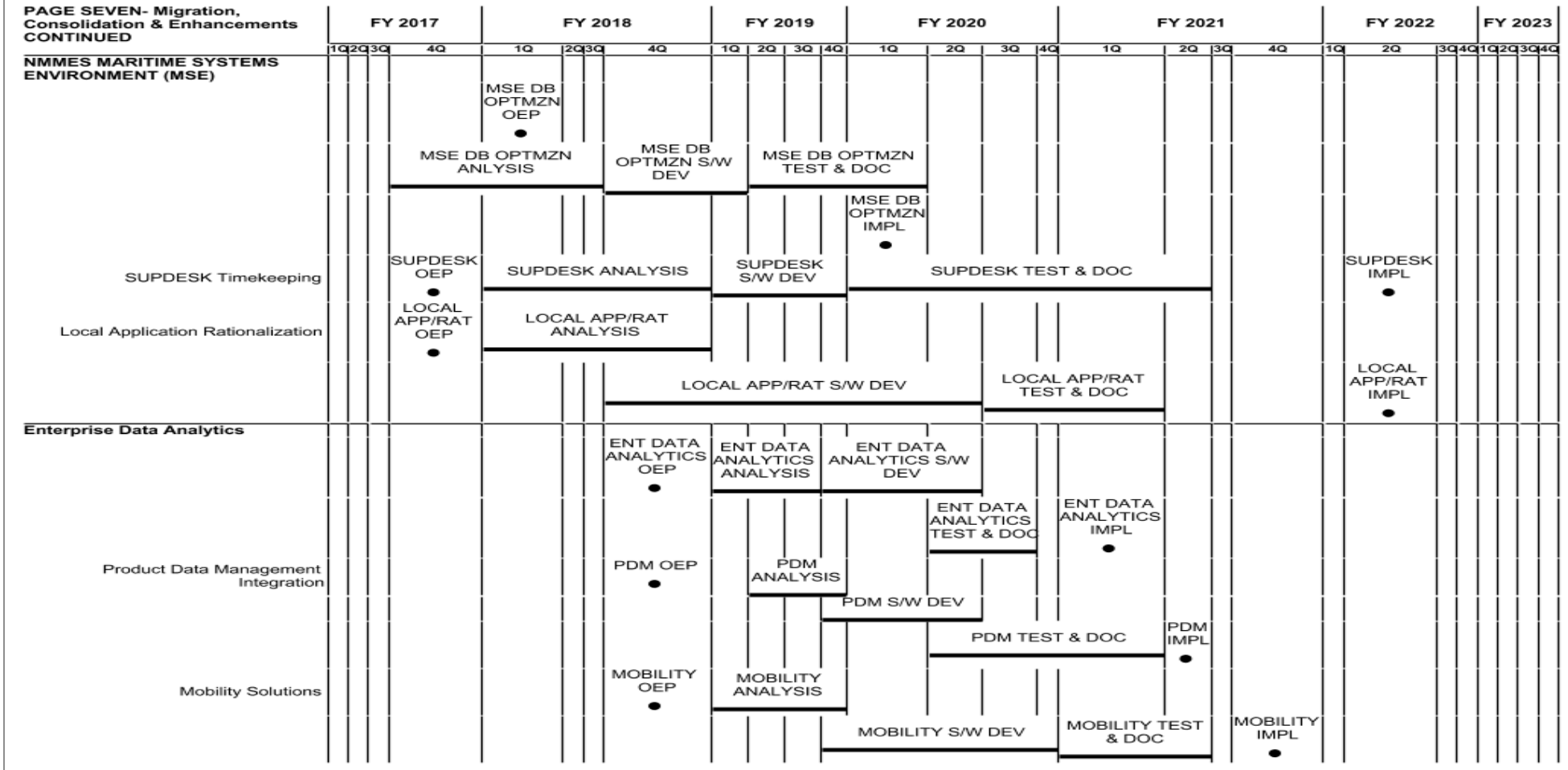
2019DON - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*



2019DON - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2904 / *NAVSEA IT*



2019DON - 0605013N - 2904

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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): eTWD Testing & Documentation	2	2017	4	2017
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): eTWD Software Development	2	2017	4	2017
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): AIM Changes	2	2017	2	2018
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): eTWD Implementation	4	2018	4	2018
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: PSS UPGRADE: PSS Upgrade Scheduling Improvement OEP Approval	4	2017	4	2017
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: PSS Upgrade Scheduling Improvement Analysis	4	2017	2	2018
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: PSS Upgrade Scheduling Improvement Software Development	2	2018	4	2018
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: PSS Upgrade Scheduling Improvement Testing & Documentation	4	2018	2	2019
PROJECT SEQUENCING & SCHEDULING (PSS) UPGRADE: PSS Upgrade Scheduling Improvement Implementation	3	2019	3	2019
PAGE THREE - Migration, Consolidation & Enhancements				
PLANNED MAINTENANCE SYSTEM (PMS): PMS UPGRADE: PMS Upgrade OEP Approval	2	2017	2	2017
PLANNED MAINTENANCE SYSTEM (PMS): PMS UPGRADE: PMS Upgrade Analysis	2	2017	4	2017
PLANNED MAINTENANCE SYSTEM (PMS): PMS UPGRADE: PMS Upgrade Software Development	1	2018	4	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
PLANNED MAINTENANCE SYSTEM (PMS): PMS UPGRADE: PMS Upgrade Testing & Documentation	4	2018	3	2019
PLANNED MAINTENANCE SYSTEM (PMS): PMS UPGRADE: PMS Upgrade Implementation	3	2019	3	2019
PAGE FOUR - Migration, Consolidation & Enhancements CONTINUED				
STRATEGIC PLANNING/FORECASTING (SPF): SPF UPGRADE: SPF UPGRADE OEP Approval	4	2017	4	2017
STRATEGIC PLANNING/FORECASTING (SPF): SPF UPGRADE: SPF UPGRADE Analysis	1	2018	4	2018
STRATEGIC PLANNING/FORECASTING (SPF): SPF UPGRADE: SPF UPGRADE Software Development	1	2019	1	2020
STRATEGIC PLANNING/FORECASTING (SPF): SPF UPGRADE: SPF UPGRADE Testing & Documentation	1	2020	3	2020
STRATEGIC PLANNING/FORECASTING (SPF): SPF UPGRADE: SPF UPGRADE Implementation	4	2020	4	2020
NMMES Technical Refresh: NMMES Technical Refresh Advanced Planning	1	2017	1	2017
NMMES Technical Refresh: NMMES Technical Refresh OEP Approval	4	2017	4	2017
NMMES Technical Refresh: NMMES Technical Refresh Alternative Analysis	3	2017	2	2018
NMMES Technical Refresh: NMMES Technical Refresh Solution Analysis	2	2017	2	2018
NMMES Technical Refresh: NMMES Technical Refresh Software Development	3	2018	4	2020
NMMES Technical Refresh: NMMES Technical Refresh Testing & Documentation	1	2021	4	2021
NMMES Technical Refresh: NMMES Technical Refresh Implementation	4	2022	4	2022
PAGE FIVE- Migration, Consolidation & Enhancements CONTINUED				
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade OEP Approval	4	2017	4	2017
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade Analysis	4	2017	2	2018
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade Software Development	2	2018	4	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade Testing & Documentation	4	2018	2	2019
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade Implementation	3	2019	3	2019
PAGE SIX- Migration, Consolidation & Enhancements CONTINUED				
MATERIAL MANAGEMENT UPGRADE: Material Mgmt Upgrade OEP Approval	4	2017	4	2017
MATERIAL MANAGEMENT UPGRADE: Material Mgmt Upgrade Analysis for COST Replacement	2	2018	4	2018
MATERIAL MANAGEMENT UPGRADE: Material Mgmt Upgrade Software Development	1	2019	4	2019
MATERIAL MANAGEMENT UPGRADE: Material Mgmt Upgrade Testing & Documentation	4	2019	4	2020
MATERIAL MANAGEMENT UPGRADE: Material Mgmt Upgrade Implementation	1	2021	1	2021
PAGE SEVEN- Migration, Consolidation & Enhancements CONTINUED				
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Database Optimization: OEP Approval	1	2018	1	2018
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Database Optimization: Analysis	4	2017	3	2018
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Database Optimization: Software Configuration and Standardization	4	2018	1	2019
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Database Optimization: Testing & Documentation	2	2019	1	2020
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Database Optimization: Implementation	1	2020	1	2020
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): SUPDESK Timekeeping: SUPDESK: OEP Approval	4	2017	4	2017
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): SUPDESK Timekeeping: SUPDESK: Analysis	1	2018	4	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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): SUPDESK Timekeeping: SUPDESK: Software Development	1	2019	4	2019
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): SUPDESK Timekeeping: SUPDESK: Testing & Documentation	1	2020	2	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: OEP Approval	4	2017	4	2017
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Local Application Rationalization: Local APP/RAT: Analysis	1	2018	4	2018
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Local Application Rationalization: Local APP/RAT: Software Development/Enhancement	4	2018	2	2020
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Local Application Rationalization: Local APP/RAT: Testing & Documentation	3	2020	1	2021
NMMES MARITIME SYSTEMS ENVIRONMENT (MSE): Local Application Rationalization: Local APP/RAT: Implementation	2	2022	2	2022
Enterprise Data Analytics: Enterprise Data Analytics: OEP Approval	4	2018	4	2018
Enterprise Data Analytics: Enterprise Data Analytics: Analysis	1	2019	3	2019
Enterprise Data Analytics: Enterprise Data Analytics: Software Configuration and Standardization	4	2019	2	2020
Enterprise Data Analytics: Enterprise Data Analytics: Testing & Documentation	2	2020	3	2020
Enterprise Data Analytics: Enterprise Data Analytics: Implementation	1	2021	1	2021
Enterprise Data Analytics: Product Data Management Integration: PDM: OEP Approval	4	2018	4	2018
Enterprise Data Analytics: Product Data Management Integration: PDM: Analysis	2	2019	4	2019
Enterprise Data Analytics: Product Data Management Integration: PDM: Software Configuration and Standardization	4	2019	2	2020
Enterprise Data Analytics: Product Data Management Integration: PDM: Testing & Documentation	2	2020	1	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Enterprise Data Analytics: Product Data Management Integration: PDM: Implementation	2	2021	2	2021
Enterprise Data Analytics: Mobility Solutions: Mobility Solutions: OEP Approval	4	2018	4	2018
Enterprise Data Analytics: Mobility Solutions: Mobility Solutions: Analysis	1	2019	4	2019
Enterprise Data Analytics: Mobility Solutions: Mobility Solutions: Software Development	4	2019	4	2020
Enterprise Data Analytics: Mobility Solutions: Mobility Solutions: Testing & Documentation	1	2021	2	2021
Enterprise Data Analytics: Mobility Solutions: Mobility Solutions: Implementation	4	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy											Date: February 2018	
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 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
2905: *BUPERS IT*	57.890	26.127	52.957	99.289	-	99.289	162.961	157.299	78.776	64.429	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Research and Development Funds for MPT&E Transformation under PE 0604703N have been consolidated within PE 0605013N PU 2905 starting in FY19.

A. Mission Description and Budget Item Justification

This effort is the linchpin of the Navy MPT&E (Manpower, Personnel, Training & Education) business IT Transformation strategy which 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 not cost efficient nor effective. The Transformation strategy involves revolutionary change by rapid implementation of MPT&E business IT products using the Industry Best Practices Model (e.g., early investment for largest ROI, rapid prototyping and testing, and vanilla COTS products usage.) Four projects are the cornerstones of the Navy/N1 Transformation strategy. The Navy Personnel and Pay System (NP2) includes Navy Personnel and Pay (NP2)Standard modernization and the collapse of Legacy Manpower System functionality. Second, a Single Point of Entry (SPOE) for Sailor self-service is composed of My Navy Portal (MNP), Identity and Access Management (IdAM), a Customer Relations Management (CRM) solution, and a centralized and standardized customer service center (The My Navy Career Center (MNCC)). Third, Learning Stack (LS) improves the accessibility, sophistication, and collaborative nature of educational outreach. Finally, the Authoritative Data Environment (ADE) will enable the collapse of 9 legacy data warehouses into a single, authoritative source of data truth for Sailors and Navy decision makers. Additionally, ADE will enable modern data analytics and business intelligence capabilities. All of the technology solutions will leverage hyper scale cloud based services in order to provide secure, accessible and cost effective business IT.

The increase in FY19 is aligned with the Navy's MPT&E IT Transformation initiative to develop a technology component that forms an MPT&E Navy Personnel and Pay (NP2) system. Transformation activities will include conducting prototypes, testing, integration, and migration to a cloud environment. There is significant investment being made in the development of Single Point of Entry/My Navy Portal which will provide the Sailor with a self-service web environment. A modest portion of the FY19 increase is attributed to LMS-DL transitioning field tested capability and necessary integration/development activities to enterprise production.

BILLET BASED DISTRIBUTION (BBD)

Initiative aimed at modernizing distribution systems to increase personnel readiness, improve fit and provide clear visibility to the impact on mission readiness at the billet level. As part of the Navy's transformation initiative, BBD functionality will be consolidated into NP2.

LEARNING MANAGEMENT SYSTEM - DISTANCE LEARNING (LMS-DL)

LMS-DL is aligned with the Learning Stack (LS) technology component of the Navy's Transformation initiative. LMS-DL focuses on advancing Navy learning, creating a career learning continuum and leveraging evolving technologies to expand learning solutions when and where the Sailor needs them. The Collaborative Learning

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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Environment (CLE) is a key component within the learning IT strategy that leverages Commercial-Off-the-Shelf (COTS) products to integrate the CLE with intelligent tutors, a multi-purpose reconfigurable training system (MRTS), electronic classrooms (ECR), trainers and labs, interactive multimedia instruction (IMI), instructors, and a virtual environment. The increase in FY19 is to transition a COTS LMS from a field test to enterprise production.

Aligned with the Navy's IT transformation initiative, Learning Management System permits:

(1) Mobile & flexible delivery of modular training to the sailor
(2) Synchronization of work requirements with learning modules to ensure proper training is delivered at the right time

Funding will develop and deploy new technologies for modularized training in fleet concentration areas to support the continuum of learning to include:

(1) Development, modification or replacement of the current LMS platform
(2) Integration of Manpower, Personnel, Training, and Education (MPT&E) management tools to support end to end business processes (billet information, assignment, distribution, student management, learning management, personnel information, advancement) that will be impacted by changes to learning delivery and career profiles via Progressive Navy Enlisted Classifications (e.g. Total Force Manpower Management System, Navy Personnel and Pay System, Learning Assessment System, Navy Training Management Planning System).

The Learning Management tools and supporting IT infrastructure must also be modified to support management of training into the Delayed Entry Program, the growing use of demonstration videos, social media, student and learning management for MPT&E mobility efforts, gaming and simulation technology as it is brought on-line.

LMS-DL will also introduce the Learning Continuum Pilot, a risk reduction effort that develops proof of concept alignment of sailor training requirements with learning content delivery.

MY NAVY PORTAL (MNP)

MNP is an integrated web portal that consolidates the Navy's Human Resource portals, knowledge, and applications into a single and simplified user experience. Through the use of a multi-phased development approach, MNP will provide an intuitive self-service single point of entry (SPOE) for Sailors to view and manage their personnel and career information.
MNP provides Active and Reserve Sailors with personalized interactive experiences and allows access to relevant information including learning content, human resource applications, and career business processes and tools.
MNP Phase 2C continues to mature eleven Career Life Event (CLE) capabilities. Phase 2C continues requirements refinement work with key Fleet users and stakeholders and integrates or develops the identified CLEs.
My Navy Portal may address previously deferred requirements from prior phases or in support of the Chief of Navy Personnel's IT Transformation initiatives.

ANALYSIS OF ALTERNATIVE/ECONOMIC ANALYSIS (AOA)

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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The Navy will conduct multiple AoAs and studies to analyze viable alternatives in order to determine the most efficient and effective solution to address the modernization of elements of the Navy's Manpower, Personnel, Training and Education (MPT&E) IT portfolio. AOA will assess operational effectiveness, suitability, and costs of non-tactical systems to meet emerging capability requirements.

NAVY STANDARD INTEGRATED PERSONNEL SYSTEM (NSIPS)(Will become NP2)

The NP2 increase in FY19 supports the de-customization of the Navy Standard Integrated Personnel System (NSIPS) and integration of Direct to Treasury Pay Capability via Pay Modernization (Pay Mod). This combined effort (named NP2) will result in an integrated, 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. FY19 efforts include:

1. Continuation of the second Field Test including agile development of Treasury Direct Disbursing (TDD) and Active Component / Reserve Component (AC/RC) Permeability.
2. Migration of field test to a secure and accredited commercial cloud hosting solution.
3. Completion of Legacy NES and OPINS consolidation efforts.
4. Integration of Bi-Service PeopleSoft license with NSIPS personnel and pay modernization solution.

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 MPT&E 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. This combined effort (named NP2) will result in an integrated, 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 sunsetting DJMS 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.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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Efforts in FY19 are focused on system development, testing and delivery of core components associated with Military Pay, Personnel Transactions that effect Pay, Auditability, Accounting, and Treasury Direct Disbursement. Beyond F19, development will continue and will bring continued integration of legacy systems such as those used for detailing and distribution, management of Sailor performance, and talent management and matching.

NAVY MANPOWER REQUIREMENTS SYSTEM (NMRS)

NMRS will modernize obsolete software and incorporate a wide array of enhancements (expanded capabilities based on sponsor's approved Functional Requirements Document) of new capabilities in support of Manpower Requirement efficiencies.

NMRS is a key tool which Navy manpower managers rely on to set, implement, and execute manpower requirements. Recommendations for improving data bases and the Navy's mobilization capacity rely on NMRS to make strength determinations. The planned effort also includes technical evaluation and integration of products produced by the Simulation Toolset for Analysis of Mission, Personnel and Systems (STAMPS) program. As envisioned by the Navy's Transformation initiative, NMRS will eventually be consolidated into the MPT&E Personnel and Pay System technology component of the transformation.

RISK MANAGEMENT INFORMATION (RMI)

The RMI program is a consolidation of DON risk management requirements into a single Program of Record (POR) to provide modern safety reporting and management capabilities for both active and reserve Navy and Marine Corps commands. RMI enables agile responses to business rule changes, automation of routine actions, improved data integrity, and facilitates self-service for organizations and individuals.

RMI is being developed in three increments of capabilities: Streamlined Incident Reporting (SIR), Safety Program Management (SPM), and Analysis & Dissemination (A&D). A fourth requirement, Single Point of Entry (SPOE) integration, will be accomplished as part of the development of the three RMI increments since each will be built on the same Commercial Off The Shelf (COTS) platform. Each of these capabilities will be acquired as individual Abbreviated Acquisition Programs using an incremental development approach for reengineered business processes, while consolidating five legacy systems Web-Enabled Safety System (WESS), Enterprise Safety Application Management Systems (ESAMS), Portsmouth Occupational Accident and Illness Reporting System (POAIRS), Medical Mishap and Compensation (MMAC), and Injury Tracker (INJTRK).

AUTHORITATIVE DATA ENVIRONMENT (ADE)

ADE is part of the Navy's MPT&E IT Transformation initiative aligned directly with the Authoritative Data Environment technology component of the transformation. ADE is aimed at transitioning the current project based ADE into a full enterprise solution that is based on modern IT service models and cloud hosting technology. The transformation initiative will consolidate multiple legacy data warehouses and stream that data through a single, authoritative environment. This will advance data analytics and visualization capabilities, and add common platform services in a big data environment that is consistent with private industry. This acceleration toward a true Navy-wide personnel authoritative data environment is a transformational increase in capability for decision support and improving personnel readiness.

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As part of the Transformation strategy, the Chief of Naval Personnel has directed expansion and improvements of the ADE in making MPT&E data more available to commanders, sailors, business owners and fleet executive leadership. The ADE provides infrastructure, operations and sustainment of the Navy MPT&E Authoritative Data Warehouse(ADW), enterprise service bus, and web support services.

The capabilities delivered by this funding include:
(1) Completed "golden record" expansion increments
- Data quality
- Governance
- Security
- Data standardization

(2) Increased capabilities for MPT&E supply chain & business operations
- Data discovery
- Advanced visualization tools
- Predictive analytics

(3) Enhanced architecture to support unstructured data and "big data" analytics
(4) Improved support for future identity management & access for mobile device capability

APPLICANT RELATIONSHIP MANAGEMENT (ARM)

ARM provides automated support of the management of recruiting information. ARM enables all levels of recruiting to have real-time access to timely and accurate information. ARM provides managers with decision-making support by consolidating Navy Recruiting Command (NRC) legacy application systems. The complete ARM Systems Dev/Mod effort will incorporate biometrics and paperless implementation across all lines of business systems to gain additional efficiencies.

Included in the ARM program is the Self Service Accessions Application (SSAA). Phase II of this effort will build the SSAA application into the ARM system. SSAA is a mobile device-based software application. SSAA supports a change in the NRC business processes from a recruiter-driven business model to an applicant self-service business model. This "app" will be used by applicants to collaborate with recruiters anytime & anywhere to more efficiently and effectively navigate the recruiting process. As envisioned by the Navy's Transformation initiative, ARM functionality will eventually be consolidated into the MPT&E Integrated Personnel and Pay System technology component of the transformation.
2905.S22 Funding associated with Personnel TEMPO (PERSTEMPO) is being aligned to PE 060513N 2905 beginning in FY15. This aligns the funds with the organization required to execute PERSTEMPO strategy as directed by the CNO to the CNP. Two components are rolled together, modifying the ITEMPO system and further developing the Navy Deployment Health Location process. This strategy consists of Business Process Re-engineering (BPR) defined requirements (artifact is a Functional Requirements Document-FRD), modernization/risk reduction of existing system (ITEMPO) and a process that uses our corporate systems at DMDC Mechanicsburg.

The desired effects of PERSTEMPO strategy are:

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- Generate efficiencies throughout the Fleet to meet statutory requirements and improve Fleet readiness.
- Provide improved service to Sailors (improving retention).
- Facilitate informed management decision making.

Associated sub-projects:

Individual TEMPO (ITEMPO): PERSTEMPO was implemented to comply with Sections 586 and 923 of the FY00 NDAA, now within 10 USCS 991. This is a non-acquisition category program. Each military service is to track and manage the number of deployed days and number of temporary duty days away from homeport for active and reserve personnel. Information is reported to DoD/DMDC, which is used to report to the Secretary of Defense. ITEMPO is the system used to comply with these directives. PERSTEMPO supports Navy management of stress on the force as requested by the CNO; Commander, U.S. Fleet Forces Command (N1); and the Commander, U.S. Pacific Fleet (N1). Enhancements will be performed on the primitive ITEMPO functional tools/metrics to make it actionable, current in technology, user friendly, and integrated into a variety of personnel and pay systems. Preparations are already underway to complete the FRD and perform a gap analysis within existing resources. This will support pay auditability/certainty when payment is authorized.

DEPLOYMENT HEALTH LOCATION: Deployment Health Location is being implemented per DoD Instruction 6490.03, "Deployment Health," (DoD Instruction) August 11, 2006. This requires the Military Departments to plan, program, and implement a system to ensure daily location recording for all deployed personnel assigned, attached on temporary duty, or temporary additional duty to deployed units. The Services are required to report the daily location information electronically to DMDC at least weekly. Also, this will correct the finding by DoD Inspector General Report NO. DODIG 2012-112 of Jul 18, 2012.

Capability change for ITEMPO: The system has had no significant software change in more than 8 years. The report mechanisms are extremely antiquated.

Capability change Deployment Health Location: Deployed Service members are potentially subject to occupational and environmental hazards that can include exposure to harmful levels of environmental contaminants, such as industrial toxic chemicals, chemical and biological warfare agents, or radiological and nuclear contaminants. These hazards may include contamination from the past use of a site, battle damage, stored stockpiles, military use of hazardous materials, or from other sources. Harmful levels include high-level exposures that result in immediate health effects and low-level exposures that could result in delayed or long-term health effects. Collecting deployment information will allow the Military Health System to identify populations at risk for occupational and environmental exposures that may need medical follow-up. Improving timeliness of treatment will have a positive effect on readiness and long-term wounded warrior care.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Billet Based Distribution (BBD)	2.140	4.860	4.800	0.000	4.800
Articles:	-	-	-	-	-
FY 2018 Plans:					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Complete testing and deployment of BBD Phase 1C. Begin requirements analysis, design and development of BBD Phase 2 Enlisted Optimization and Slating and Phase 2 Officer functionality. ***FY 2019 Base Plans:*** Complete Development and Testing of Enlisted Optimization/Slating and Officer functionality. Complete Requirements Analysis of Officer Optimization/Slating and Enlisted Assignment functionality. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding decrease of $60K reflects ramp down to completion of efforts associated with the Enlisted/Officer Optimization/Slating functionalities.					
Title: Learning Management System - Distance Learning (LMS-DL)	0.613	5.606	6.469	0.000	6.469
Articles:	-	-	-	-	-
FY 2018 Plans: 1. Completion of pilot project review and assessments. 2. Design, design review, testing, production readiness, and deployment of Career Profile functionality. 3. Procure and standup Collaborative Learning Environment (CLE) for enterprise based on pilot results. ***FY 2019 Base Plans:*** 1. Procure and implement LMS-DL Web Conferencing capability and integrate with existing LMS-DL components to form decentralized learning environment. 2. Integrate COTS LMS solution with Learning Content Repository. 3. Integrate Optimized Scheduler with capability to manage classroom usage. 4. Develop Game Engine capable of harmonizing with LMS components. 5. Development and integration of LMS components to support seamless CLE toolset. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase is due to functional development efforts for a flexible learning management system (Learning Stack) that is an enterprise online training delivery platform that provides training and a collaborative					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
learning environment for Sailors world-wide, ashore and afloat as a foundational effort in the N1 MPT&E IT Transformation.					
Title: My Navy Portal (MNP)	3.269	4.290	11.145	0.000	11.145
Articles:	-	-	-	-	-
FY 2018 Plans: 1. Continue the development and integration of portal CLE portlet capabilities for Sailors to manage their careers in an intuitive self-service web environment. 2. Provide on-going training and support to identified MNP content and page administrators who must be trained on the new capability being developed for each incremental release of new MNP capability. 3. Integrate with MPT&E applications and capabilities. MNP functional users and sponsors continue to shift their priorities for MNP integration with outside systems. Those outside system integrations require new MNP development/modernization code builds to enable MNP to successfully partner with them. 4. Support development of a cloud MNP hosting solution. MNP requires new development/modernization of its underlying architecture to function properly once migrated to the cloud hosting platform.					
FY 2019 Base Plans: 1. Support evolving MNP into a Single Point of Entry (SPOE) as a key component of OPNAV N1's IT Transformation efforts. 2. Continue the development and integration of portal CLE portlet capabilities for Sailors to manage their careers in an intuitive self-service web environment. 3. Integrate with OPNAV N1s "55 to 1" Transformation plan (system consolidation) in order to streamline MPT&E applications and capabilities. MNP functional users and sponsors continue to refine their priorities for MNP integration with outside systems. Those discrete system integrations require new MNP development/ modernization code builds to enable MNP to successfully partner with them. 4. Support development of a commercial cloud MNP hosting solution. MNP seeks to migrate from a government cloud hosting platform to a commercial cloud hosting solution. 5. Develop several mobile applications as a key component of OPNAV N1s Sailor Self Service drive. My Navy Portal will serve as the front-end, electronic interface for Sailor ticket requests coming into the center. 6. Partner with OPNAV N1 to integrate and serve as a key platform to support the My Navy Career Center and My Navy Self Support Services.					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
7. Assist in establishing a core Identity Access Management program to improve Fleet authorization and security procedures. Software will require modest reconfiguration to meet Navy security parameters. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase is due to the development and integration of CRM tool with SPOE and the link to the My Navy Career Center.					
Title: Analysis of Alternative Economic Analysis (AOA EA) ***Articles:*** ***FY 2018 Plans:*** 1. Complete AoA for cloud transition Courses Of Action (COA) 2. Complete AoA for personnel accountability processes 3. Complete AoA for personnel manpower analysis for Sailor 2025 4. Non-AoA studies and analyses encompassing the MPT&E enterprise. ***FY 2019 Base Plans:*** 1. Begin AoA for risk reduction field test study for PersPay ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** FY19 funding decrease of $200K due to fewer AoA's scheduled in FY19.	0.800 -	0.700 -	0.500 -	0.000 -	0.500 -
Title: Navy Manpower Requirements System (NMRS) ***Articles:*** ***FY 2018 Plans:*** 1. Complete design phase 2. Conduct development phase 3. Complete CDR 4. Initiate system testing	0.000 -	2.000 -	1.500 -	0.000 -	1.500 -

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
NMRS will begin design and development of the new capabilities of the Fleet Manpower Requirements Document (FMRD) that will improve the Navy's ability to forecast/determine/implement manpower requests for the Navy. Additionally, NMRS will integrate enhanced functionality from the Simulation Toolset for Analysis of Mission, Personnel and Systems (STAMPS) S&T effort, merging the new product into a single cohesive manpower system within TFMMS. Testing will ensure that the developed design for the enhanced NMRS/ Manpower system meets all requirements. ***FY 2019 Base Plans:*** 1. Continue NMRS Incremental Acceptance Testing 2. Continue to integrate & test STAMPS functionality 3. Continue IA / Cybersecurity strategy 4. Upgrade & conduct operational Test NEDC environments (CL & UNCL) 5. Standup & begin testing of DISA CDS 6. Begin data load, data validation & verification 7. Begin design, development & testing of interfaces & reports 8. Initiate Logistics & Training strategy NMRS will continue functional system testing of the new capabilities of the Fleet Manpower Requirements Document (FMRD). NMRS will continue to integrate enhanced STAMPS functionality. NMRS will continue its Information Assurance (IA) / Cybersecurity Strategy to ultimately achieve the authority to operate (ATO) prior to production deployment. NMRS will upgrade its current Classified & Unclassified NEDC environments and standup and begin testing its DISA Cross Domain Solution (CDS). NMRS will continue data verification & validation and begin design, development & testing of required interfaces & reports. NMRS will initiate its Logistics & Training execution strategy. The above mentioned activities are required to conduct the Test Readiness Review (TRR) and to begin User Acceptance / Product Code Completion Testing. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** The decrease is due completion of several system tests that began in FY18 but are completed early in FY19 and will not require funding for the entire FY.					
Title: Navy Personnel and Pay (NP2) (Formerly NSIPS)	8.847	23.845	63.775	0.000	63.775
Articles:	-	-	-	-	-

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
FY 2018 Plans: NP2 increase in FY18 is aligned with the Sailor 2025 initiative to modernize personnel systems. The substantial increase is attributed to the planned start of the Pay Modernization (PayMod) program, and also includes an add in support of the DoD Force of the Future for a Navy AC/RC Permeability Solution to; (1) extend the reach for soliciting candidates for Navy jobs, (2) streamline the internal processes and supporting technologies to ensure timely payment for personnel who transition between AC, RC, Government civilian or contractor jobs, and (3) improve the Navy's ability to support Component Commanders with rapid requirements posting and talent acquisition for emergent needs. 1. Bi-Service PeopleSoft license acquisition 2. Continuation of FY17 effort to implement strategy in completing deferred software changes related to retirements, separations, selection board preparation, personnel appraisal, and personnel accountability that require development and modernization; and implement improved modernized personnel processes 3. In FY18, PAYMOD will complete its acquisition processes and award its first Task Order to develop increment 1, which focuses on creating a PeopleSoft Global Payroll baseline and implementing the initial modernized military pay capabilities. 4. Complete fit/gap analysis of the permeability functional requirements to personnel, pay, and authoritative data environment requirements. Solicit and award contract or task order and complete the System Requirements Review/System Functional Review (SRR/SFR).					
FY 2019 Base Plans: NP2 increase in FY19 is aligned with the Navy's MPT&E IT Transformation initiative to develop a technology component that forms an MPT&E Navy Personnel and Pay (NP2) system. Transformation activities will include conducting prototypes, testing, integration, and migration to a cloud environment. FY19 efforts include: 1. Continuation of the second Field Test. Software development life cycle activities to enable desired HR and Payroll operations in a production environment while developing the TDD capability. 2. Migrate field test to a secure and accredited commercial cloud hosting solution. The migration will allow a development environment for future field tests, prototypes, and pilot projects to help achieve Navy MPT&E Transformation objectives. 3. Complete NES and OPINS consolidation efforts. 4. Build MPT&E system functionality into a COTS Pay Modernization baseline, which will feed into modernized military personnel and pay capabilities and Active Component/Reserve Component (AC/RC) permeability. 5. Integration of Bi-Service PeopleSoft license with personnel and pay modernization solution.					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
6. Define scope and minimum attributes for the PERS/PAY solution set 7. Develop level A/B/C functional requirements to address the Personnel, Payroll, and Audit business needs across MPT&E to support FOC PERS/PAY capabilities 8. Analyze DFAS payroll services/functions and determine feasibility to transition services to Navy ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** The increase is due to development of Treasury Direct Disbursement (TDD) functionality within Navy Personnel and Pay system and migration to a cloud environment. The cost drivers are an increase in development and testing of an integrated personnel and pay solution with TDD.					
Title: Risk Management Information (RMI) ***Articles:*** ***FY 2018 Plans:*** 1. Complete design and implement Safety Program Management (SPM) configuration and interfaces. 2. Complete Phase I Analysis and Dissemination (A&D) to include configuration of SPM reports and metrics 3. Begin implementation of Phase II A&D. ***FY 2019 Base Plans:*** 1. Complete development of RMI Streamlined Incident Reporting (SIR) and Analysis and Dissemination (A&D) requirements 2. Begin acquisition planning of RMI Safety Program Management (SPM) and Single Point of Entry (SPOE) ***FY 2019 OCO Plans:*** N/A	2.169 -	1.100 -	1.100 -	0.000 -	1.100 -
Title: Authoritative Data Environment (ADE) ***Articles:*** ***FY 2018 Plans:*** 1. FY18 funds will be used for Phase 2 engineering design, development, testing and supporting infrastructure to incorporate additional MPTE data warehouse programs into the ADE baseline, expanding on the current Enterprise Service Bus (ESB) and application programming interface (API) tools.	3.891 -	9.800 -	10.000 -	0.000 -	10.000 -

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
2. FY18 will also procure data migration services to affect the moves of source data into the new enterprise baseline instance. ***FY 2019 Base Plans:*** 1. ADE Functional laboratory in the cloud environment. 2. ADE 2.0 architecture in the cloud and migrate the Navy Training Management Planning System (NTMPS) (as known as; ADE 1.5) data warehouse (DW) to the cloud. This is the first of nine legacy MPT&E data warehouses being consolidated into ADE. 3. Consolidate the Navy Personnel Database (NPDB) data warehouse into the ADE 2.0 environment. This is the second of nine legacy DWs being consolidated into ADE. 4. Consolidate Navy Manpower Program and Budget System (NMPBS) data warehouse into the ADE 2.0 environment. This is the third of nine legacy MPT&E DWs being consolidated into ADE. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase is the result of consolidating three data warehouses into ADE and the primary cost driver is contract technical services.					
Title: Applicant Relationship Management (ARM) ***Articles:***	4.398 -	0.556 -	0.000 -	0.000 -	0.000 -
FY 2018 Plans: 1. Conduct software requirement analyses leading up to Production Readiness Review (PRR) 2. Conduct regression testing for proper integration with earlier development efforts 3. Create improved audit management capability for increased efficiency 4. Provide enhanced user and data management capabilities to efficiently integrate Self Service Accessions Application (SSAA) 5. Complete ARM CRM pilots ***FY 2019 Base Plans:*** N/A ***FY 2019 OCO Plans:***					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decrease is due to completion of ARM CRM pilots and transition to sustainment.					
Title: Recruiting Information System (NRIS)	0.000	0.200	0.000	0.000	0.000
Articles:	-	1	-	-	-
Description: The Recruiting Information System (NRIS) creates a holistic approach to Navy Accessions by integrating Recruiter and Applicant information in real-time and to appropriate Manpower, Personnel, Training, and Education DoD business systems. Combined with Mobile Recruiter Initiative (MRI), the NRIS family of web enabled systems extends the recruiting force point-of-presence and key business processes to the field; facilitates real-time data sharing and paperless processing across the Accessions supply chain; and drives down the total number of transactions required to transition from street to fleet. NRIS supports the active and reserve component, enlisted and officer accessions processes and includes system interfaces that eliminate multiple data entry and reduces errors. Interface partners include CeTARS (book school seats and initial strength gain), MIRS/eSOA (schedule applicants for physicals and testing at MEPS) and NSIPS (start the initial personnel record). NRIS encompasses PRIDE Modernization-I, WebRTools, CIRIMS and NASIS; and will include PRIDE Modernization-II and ARM when deployed in FY15. The NRIS architecture provides the recruiting force with an agile, flexible, secure, and data-centric IT operating environment, the key building block for business transformation and supports the command's RF2030 strategy. ***FY 2018 Plans:*** Start/complete modification of PRIDE MOD II and ARM interface with Career Waypoint. ***FY 2019 Base Plans:*** N/A ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:***					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Decrease of -0.2 from FY18 to FY19 is due to anticipated completion of PRIDE MOD II and ARM interface with Career Waypoint effort as planned. FY19 Baseline for NRIS effort is $0.					
Accomplishments/Planned Programs Subtotals	26.127	52.957	99.289	0.000	99.289

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 8106: *Command Support Equipment*	0.536	2.755	8.959	-	8.959	1.910	0.558	1.120	1.755	0.000	30.290
• 0604703N / PU 1822: *Personnel Training, Sim & Human Factors*	0.000	40.828	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	40.828

Remarks

BLI 8106 for NP2.
Research and Development Funds for MPT&E Transformation under PE 0604703N have been consolidated within PE 0605013N PU 2905 starting in FY19.

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.

BILLET BASED DISTRIBUTION (BBD)
The required services will be procured through a Cost Plus Fixed Fee (CPFF) 8a contract and a competitive, multiple award, small business Indefinite Delivery / Indefinite Quantity (ID/IQ) contract task order.

LEARNING MANAGEMENT SYSTEM - DISTANCE LEARNING (LMS-DL)
Use existing GWAC or competitive contract for any new product sourcing, use existing Bi-Service PeopleSoft license, Indefinite Delivery/Indefinite Quantity contract vehicles within PMW 240 for additional design and integration services. Investigate option of using an Interagency Agreement for an Assisted Acquisition with the Office of Personnel Management's USA Learning program.

NAVY PERSONNEL AND PAY SYSTEM (NP2)

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NP2 will incrementally implement Navy's personnel and pay modernization strategy using a variety of IDIQ contract task orders. These task orders 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.

MY NAVY PORTAL (MNP)
The required services will be procured through a competitive small business Indefinite Delivery / Indefinite Quantity (ID/IQ) Cost Plus Fixed Fee (CPFF) 8a contract.

NAVY MANPOWER REQUIREMENTS SYSTEM (NMRS)
The required services will be procured through a Cost Plus Fixed Fee (CPFF) task order awarded on a competitive, multiple award, small business Indefinite Delivery / Indefinite Quantity (ID/IQ) contract.

RISK MANAGEMENT INFORMATION (RMI)
There are existing Commercial-Off-the-Shelf (COTS) software and services that, with customization, can fill the Navy's documentation requirements and generate safety reporting of the United States Naval forces. These services will be procured through an 8A CPFF contract.

The Navy plans to leverage Contractor developed safety-related products by using a modular contracting approach to implement and combine capabilities from the following systems.

(a) Streamlined Incident Reporting (SIR)
(b) Single Point of Entry (SPOE)
(c) Safety Program Management (SPM);
(d) Analysis & Dissemination (A&D)

AUTHORITATIVE DATA ENVIRONMENT (ADE)
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.

APPLICANT RELATIONSHIP MANAGEMENT (ARM)
CPFF contract using GOTS software solution.
(U) PERSTEMPO: Expect to use existing systems and build applications in those environments. Specifically for ITEMPO related costing, system resources are already existing within other system budget lines, and the OMN structure has been increased from FY2016 through the FYDP to sustain these changes. For Deployment Health Location, best system will be determined to host these attributes once the FRD is completed. For software development, the existing contract vehicles will be used, managing the work through separate sub contract line items (SLINs). Existing test resources will be used for testing software modifications.

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E. Performance Metrics

BILLET BASED DISTRIBUTION (BBD)
Concurrent Users: 250 Users
Screen Refresh: 6-20 Seconds
System Recoverability: <=4 Hrs
System Interoperability: 95%
System Availability: >=95%

LEARNING MANAGEMENT SYSTEM - DISTANCE LEARNING (LMS-DL)
Capturing end user screen refresh latency as compared to current system benchmarks for on-line courses.
Identifying all integration points, failure modes and data flows required for the additional technology and approach
Identifying supply chain, instructional, and student management business process changes needed to employ the technology
Assessing server utilization and physical architecture projections (#s and types of hardware/SW/network appliances) needed for full scale use of the technology.

ANALYSIS OF ALTERNATIVE/ECONOMIC ANALYSIS (AOA)
Produce assessments for 95% of required AoAs.

NAVY PERSONNEL AND PAY SYSTEM (NP2)
The system shall allow role-based access to SSN and/or masked SSN in accordance with Personally Identifiable Information (PII) instructions 100% of the time.
The system shall have a retrieval or generation of data entry/navigation screen within 4 seconds for 90% of transactions.
System maintainability - Failures or unplanned outages shall be restored within 4 hours.
The system shall have sufficient capacity to handle anticipated user demand based on increased functionality and accessibility for at least 12,000 simultaneous users.
Data consistency - The system shall produce consistent reports when a query is duplicated using identical user-selected parameters, to include the specific timestamp of the query. System will be within 99% accuracy in replicating the report content.
Data accuracy - The system shall generate forms and accurately populate them with authoritative source data with greater than 99% accuracy between the data auto-populated forms and the data contained within the system.

MY NAVY PORTAL (MNP)
MNP will meet acquisition program and system engineering and technical review milestones for development with no outstanding severity 1-3 defects prior to production release. The portal will manage at least 50,000 concurrent actions per hour and 200,000 concurrent users per hour.

NAVY MANPOWER REQUIREMENTS SYSTEM (NMRS)
Security- No identified / open findings without documentation of implemented mitigations and a remediation plan. No residual CAT I findings, or risk aggregation to CAT I.
Concurrent Users - A minimum of 35 concurrent users without degradation of system performance.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2905 / *BUPERS IT*

Transactions - 98% of transactions completed successfully
System Reliability - Edit failures transmitted data that are not detected automatically and require field level manual intervention to correct in less than 2% of all transactions.
System Availability - Available 95% of the time.
Reporting - System must generate, populate, and display simple reports within ten seconds and complex reports within two minutes.
Queries - System must have the ability to execute simple queries within ten seconds and complex queries within fifteen seconds.
Screen Refresh - System shall have the ability to perform a screen refresh invoked by the user within fifteen seconds of submission.
Navigation - System shall have the ability to navigate between hierarchy levels while utilizing the map within ten seconds of each instance of level change.

RISK MANAGEMENT INFORMATION (RMI)
Safety Incident Reporting Functionality - The system shall provide the ability to utilize RMI mishap, near mishap, and hazard initial notification, report drafting, report submission, report endorsement, and mishap recommendation / action item response and tracking functionality for at least 95% of Navy and Marine Corps operational ground forces, shore commands, surface forces, aviation forces, and submarine forces
Incident Data Capture - The system shall capture safety incident report data 100% of the time.
Security - The system shall protect flagged Safety Privilege, Personally Identifiable Information (PII), and Protected Health Information (PHI), and allow only role-based access in accordance with law, regulation and policy (LRP) instructions. 100% of flagged Safety Privilege, PII, and PHI data shall be protected from unauthorized roles and tacit export.
Registered Users - The system shall support user account access for Navy and Marine Corps members and safety support users for all safety user types = (administrative, power, occasional, and infrequent)
Concurrent Active Users - The system shall have sufficient capacity to support concurrent active users or greater than 20% of all safety users.
Response Time - Data requests/queries, reports, building of custom views, etc. shall not significantly impact transaction processing time. All items will be processed within 1 second or less for 90% of requests and 3 seconds or less for 10% of single record requests.

AUTHORITATIVE DATA ENVIRONMENT (ADE)
The system shall provide an audit trail for all system transactions.
The system shall transfer data payloads of up to 1 megabyte (MB) among services.
The system shall transfer data transactions of up to 1 MB among applications.
The system shall allow any authorized application or system to insert data.
The system shall provide CAC-enabled login for identity management.

APPLICANT RELATIONSHIP MANAGEMENT (ARM)
The system shall have the ability to perform simple queries and present data to the user within five seconds upon submission.
ARM shall have no architectural limitations that would preclude a minimum of 5,000 concurrent users.
The system response time will support an experienced classifier making at least ten classifications per hour.
The ARM system shall auto save information entered by a recruiter while the information is being entered without degradation of system responsiveness.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2905 / *BUPERS IT*

(U) 2905 PERSTEMPO: Meet program system engineering and technical review milestones for development with no outstanding severity 1-3 defects for production release.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605013N / *Information Technology Development*	Project (Number/Name) 2905 / *BUPERS IT*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
BBD Phase 1c Increment 1 and 2, Phasde 2	C/CPFF	SSC, INC : New Orleans, LA	9.545	2.140	Dec 2016	4.860	Dec 2017	4.800	Dec 2018	-		4.800	Continuing	Continuing	Continuing
LMS-DL Pilot and Career Profile Management	C/CPFF	OPM : Pensacola, FL	1.801	2.000	Jun 2017	5.606	Jun 2018	6.469	Jun 2019	-		6.469	Continuing	Continuing	Continuing
MNP/SPOE/CRM/MNCC	C/CPFF	Katmai : Arlington, VA	10.155	3.269	Nov 2016	4.290	Jul 2018	11.145	Jul 2019	-		11.145	Continuing	Continuing	Continuing
TFMMS Design, Development, Test & Deployment (2 Increments)	C/CPFF	A3IS : Palm Coast, FL	6.619	0.000		0.000		0.000		-		0.000	0.000	6.619	Continuing
PRIDE MOD II Design, Development, Test & Deployment	C/CPFF	CGI, Fed : Washington, DC	2.185	0.000		0.000		0.000		-		0.000	0.000	2.185	1.370
AOA Design, Development, Test & Deployment	C/CPFF	CSRA : New Orleans, LA	0.992	0.800	Mar 2017	0.700	Mar 2018	0.500	Mar 2019	-		0.500	Continuing	Continuing	Continuing
NP2 Transformation	C/CPFF	CSRA : Washington, DC	9.816	3.912	Jan 2017	20.154	Jan 2018	59.970	Jan 2019	-		59.970	Continuing	Continuing	Continuing
NMRS Design, Development, Test & Deployment	C/CPFF	Millienium : New Orleans, LA	0.000	0.262	Aug 2017	2.000	May 2018	1.500	May 2019	-		1.500	Continuing	Continuing	Continuing
RMI SIR/SPOE/SPM/A&D Design, Development, Test & Deployment	C/CPFF	Syneren : Arlington, VA	5.890	2.761	Jun 2017	1.100	Jul 2018	1.100	Jun 2019	-		1.100	Continuing	Continuing	Continuing
ADE - BI / Visualization / Analytics Products	C/CPFF	CSRA : Washington, D.C.	0.000	3.500	Aug 2017	5.500	Aug 2018	5.600	Aug 2019	-		5.600	Continuing	Continuing	Continuing
ADE - System Integration	C/CPFF	Millenium : Washington, D.C.	0.000	1.200	Jul 2017	4.300	Jul 2018	4.400	Jul 2019	-		4.400	Continuing	Continuing	Continuing
ARM Phase 1-3 Design, Development, Test & Deployment	C/CPFF	HP : Orlando, FL	0.000	2.700	Dec 2016	0.556	Dec 2017	0.000		-		0.000	0.000	3.256	2.221
PERSTEMPO System Design, Engineering, and Development	C/CPFF	FLC Philadelphia : Philadelphia, PA	1.024	0.000		0.000		0.000		-		0.000	0.000	1.024	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2905 / *BUPERS IT*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Recruiting Information System (NRIS)	C/CPFF	CGI Federal, Inc : Fairfax, VA	0.240	0.000		0.200	Jan 2018	0.000		-		0.000	0.000	0.440	-
		Subtotal	48.267	22.544		49.266		95.484		-		95.484	Continuing	Continuing	N/A

Remarks

Contract award dates in FY19 are scheduled option awards of existing base contracts and do not indicate late contract obligation and expenditures.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NSIPS Bi-Service License	C/CPFF	Oracle : Redwood City, CA	9.623	3.583	Dec 2016	3.691	Dec 2017	3.805	Dec 2018	-		3.805	Continuing	Continuing	Continuing
		Subtotal	9.623	3.583		3.691		3.805		-		3.805	Continuing	Continuing	N/A

Remarks

NP2 pays the Navy's share of the Bi-Service PeopleSoft license.

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	57.890	26.127		52.957		99.289		-		99.289	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2905 / *BUPERS IT*

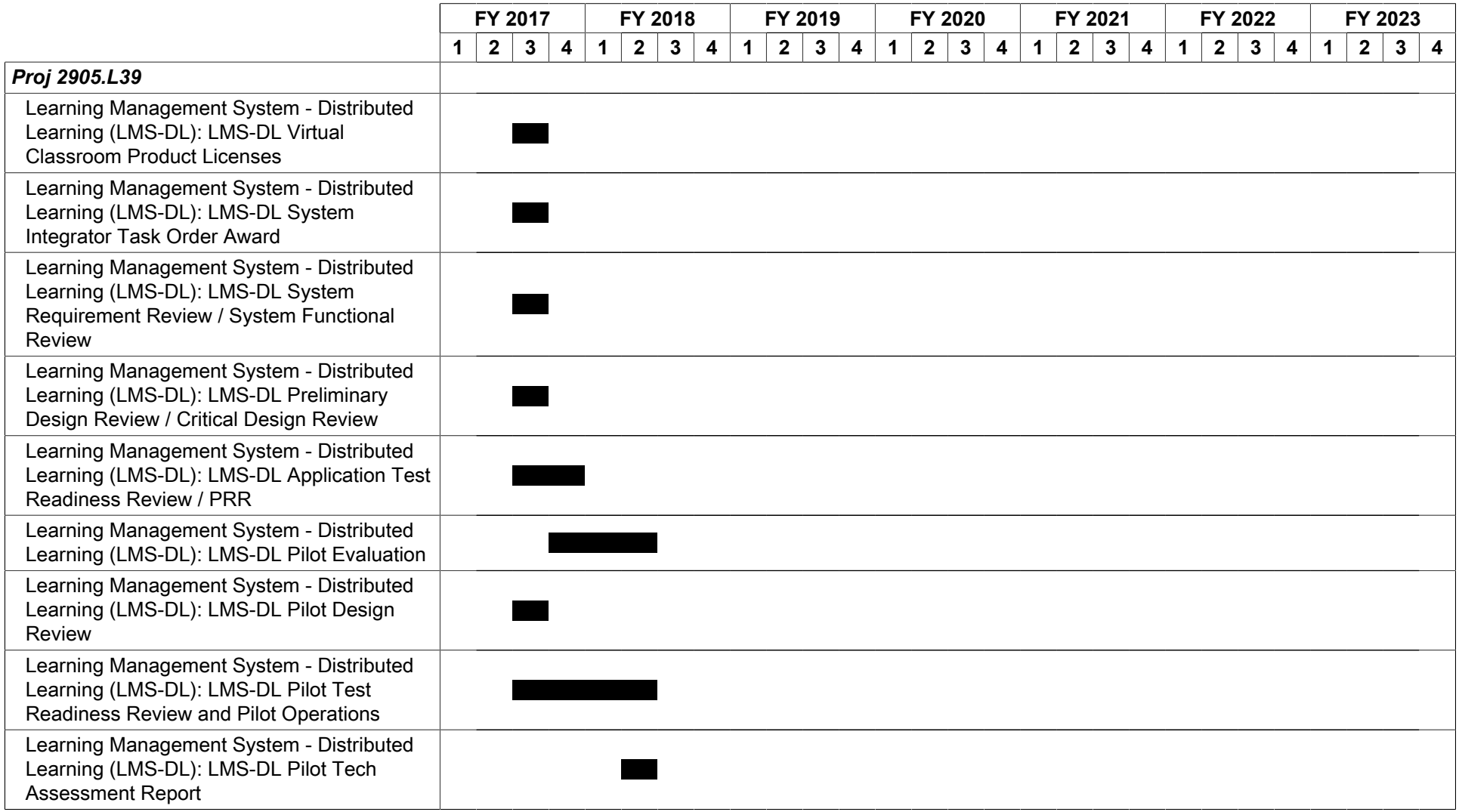

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2905 / *BUPERS IT*

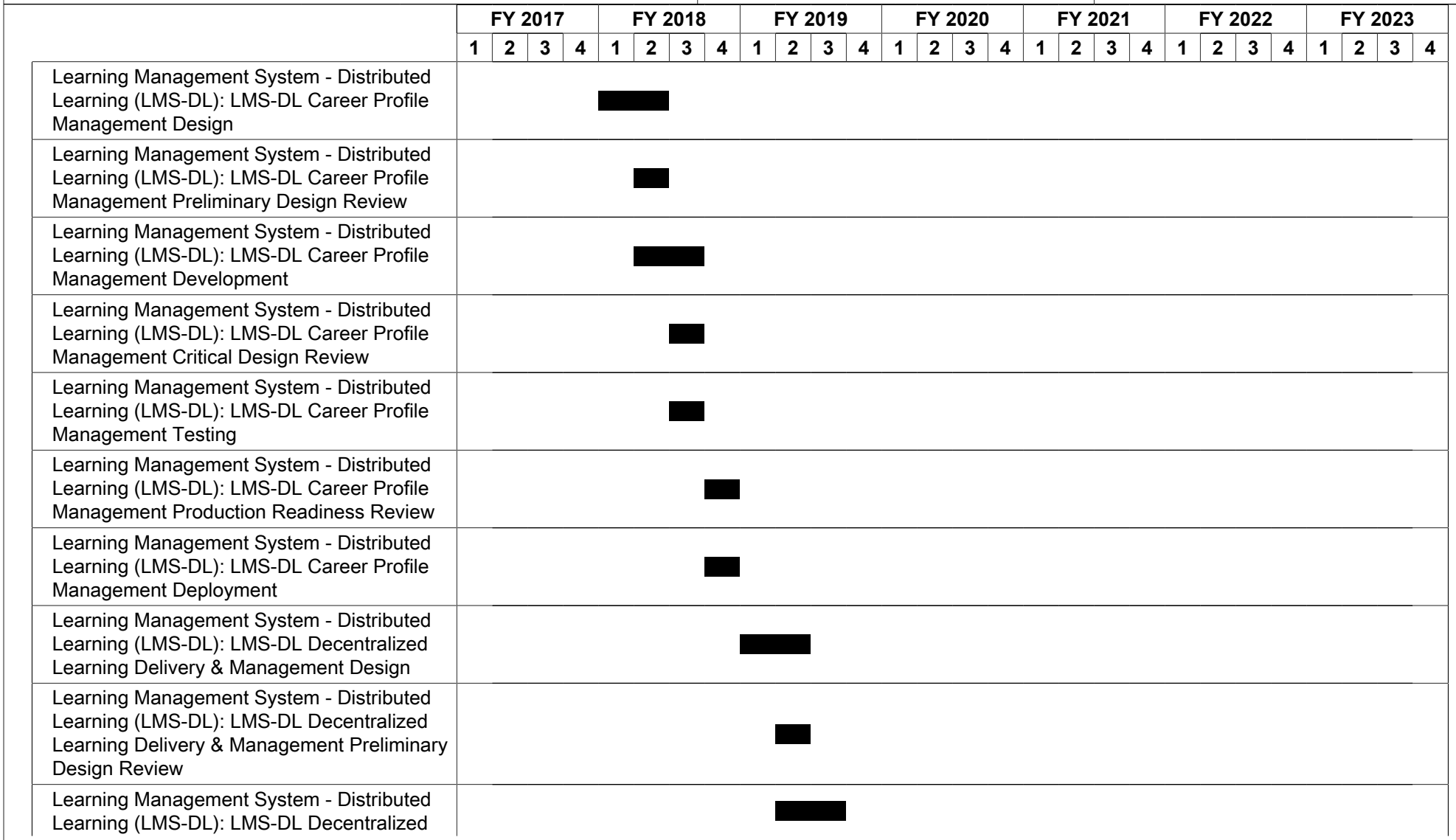

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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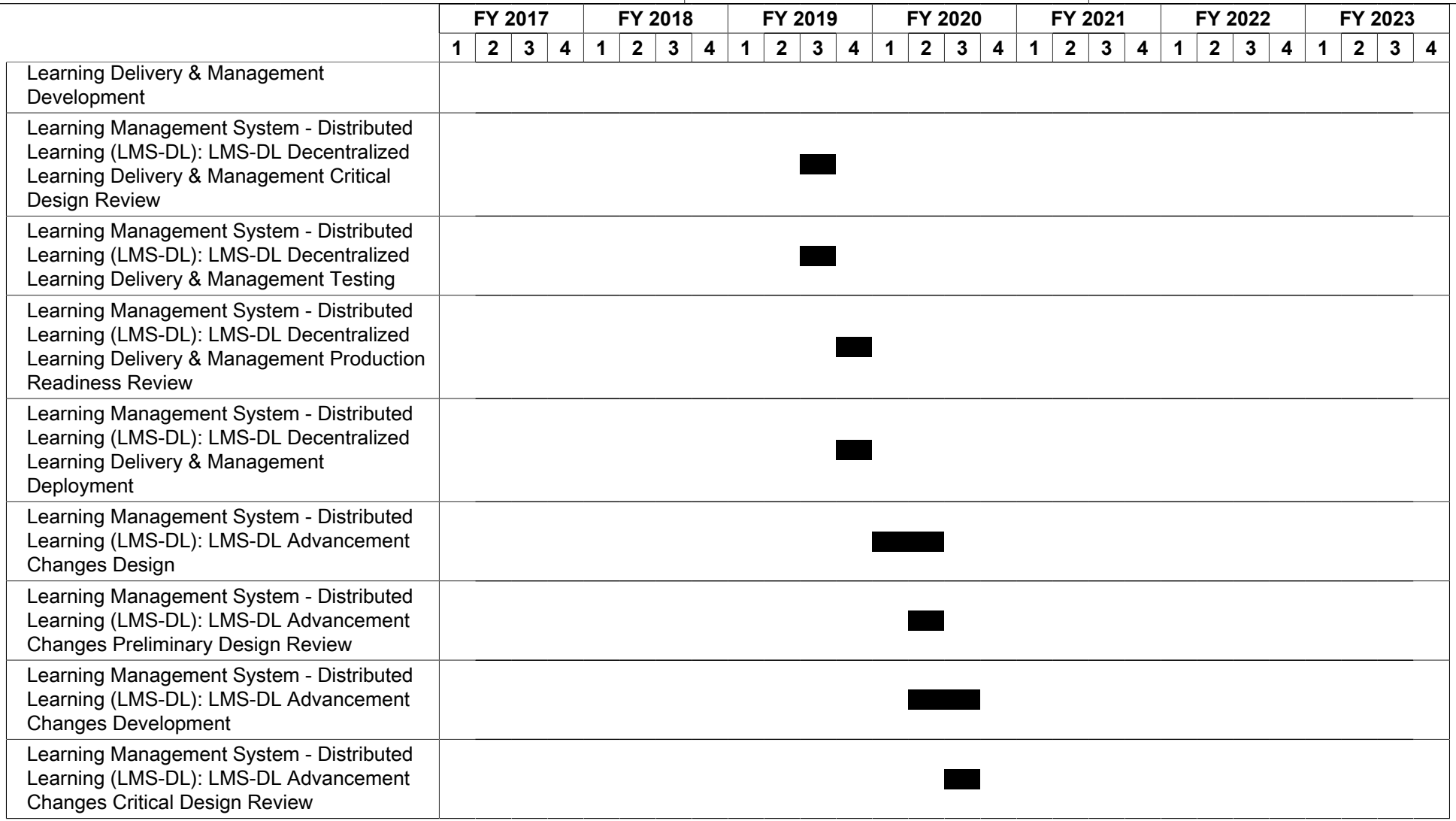

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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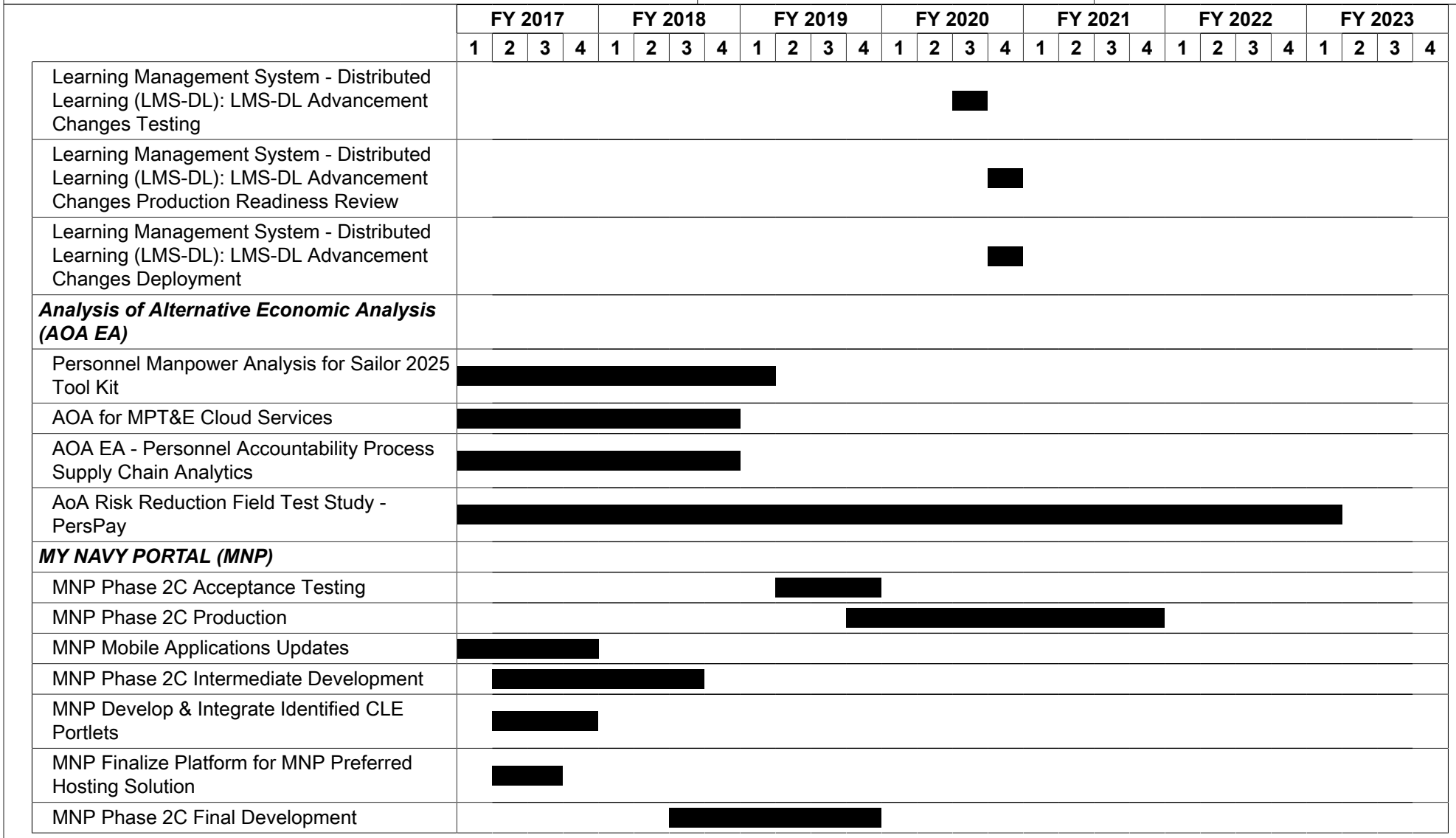

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2905 / *BUPERS IT*

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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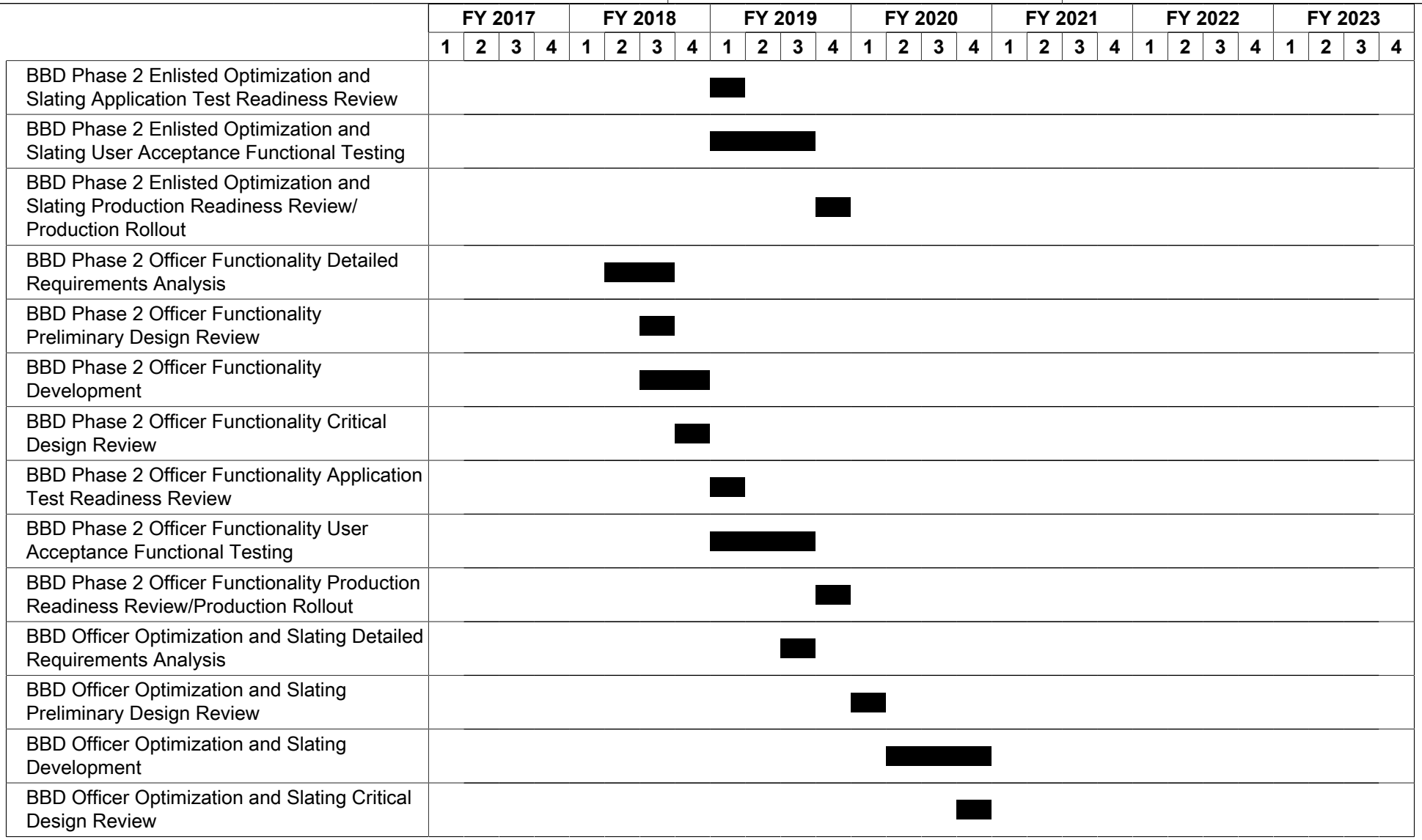

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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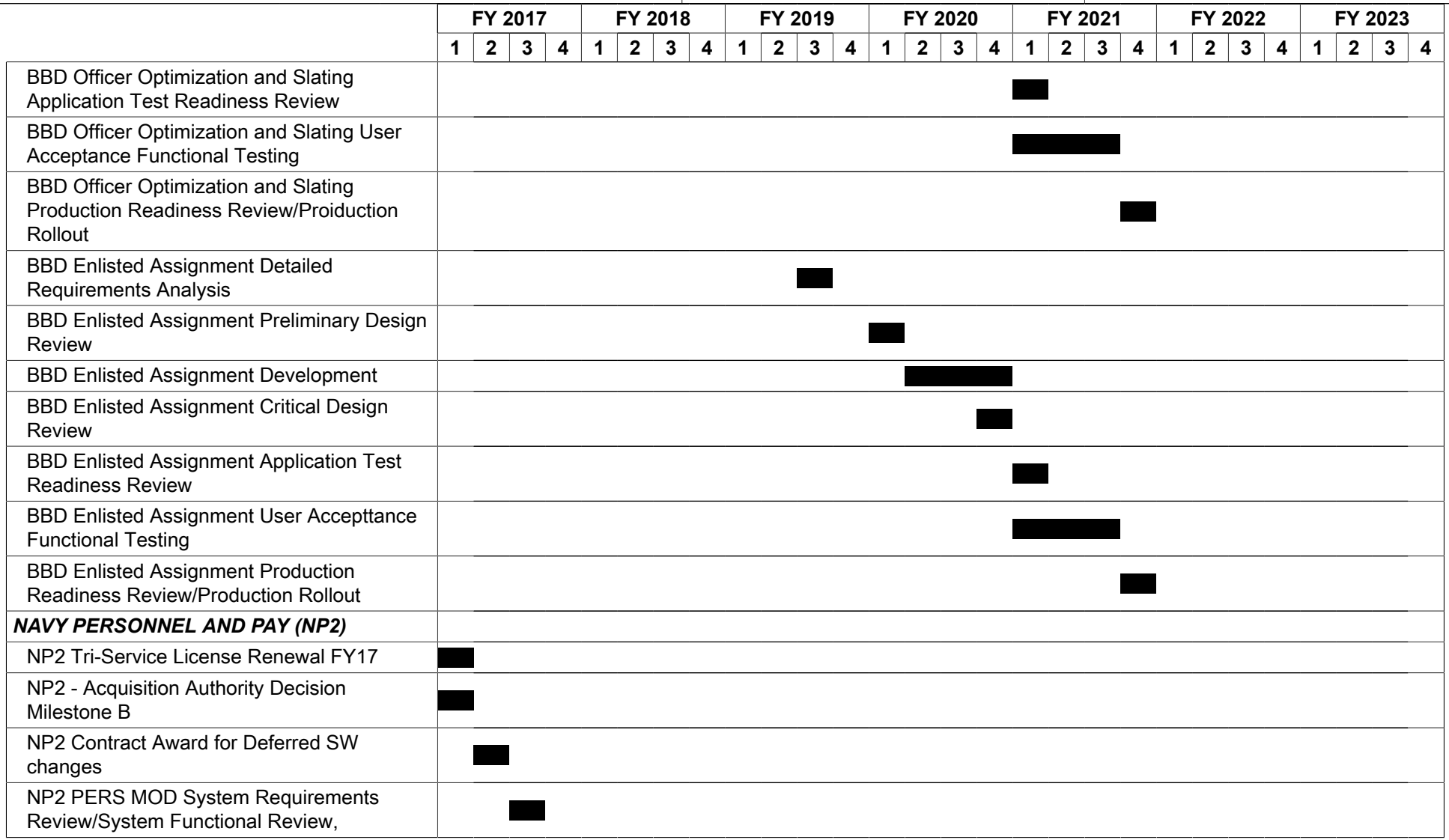

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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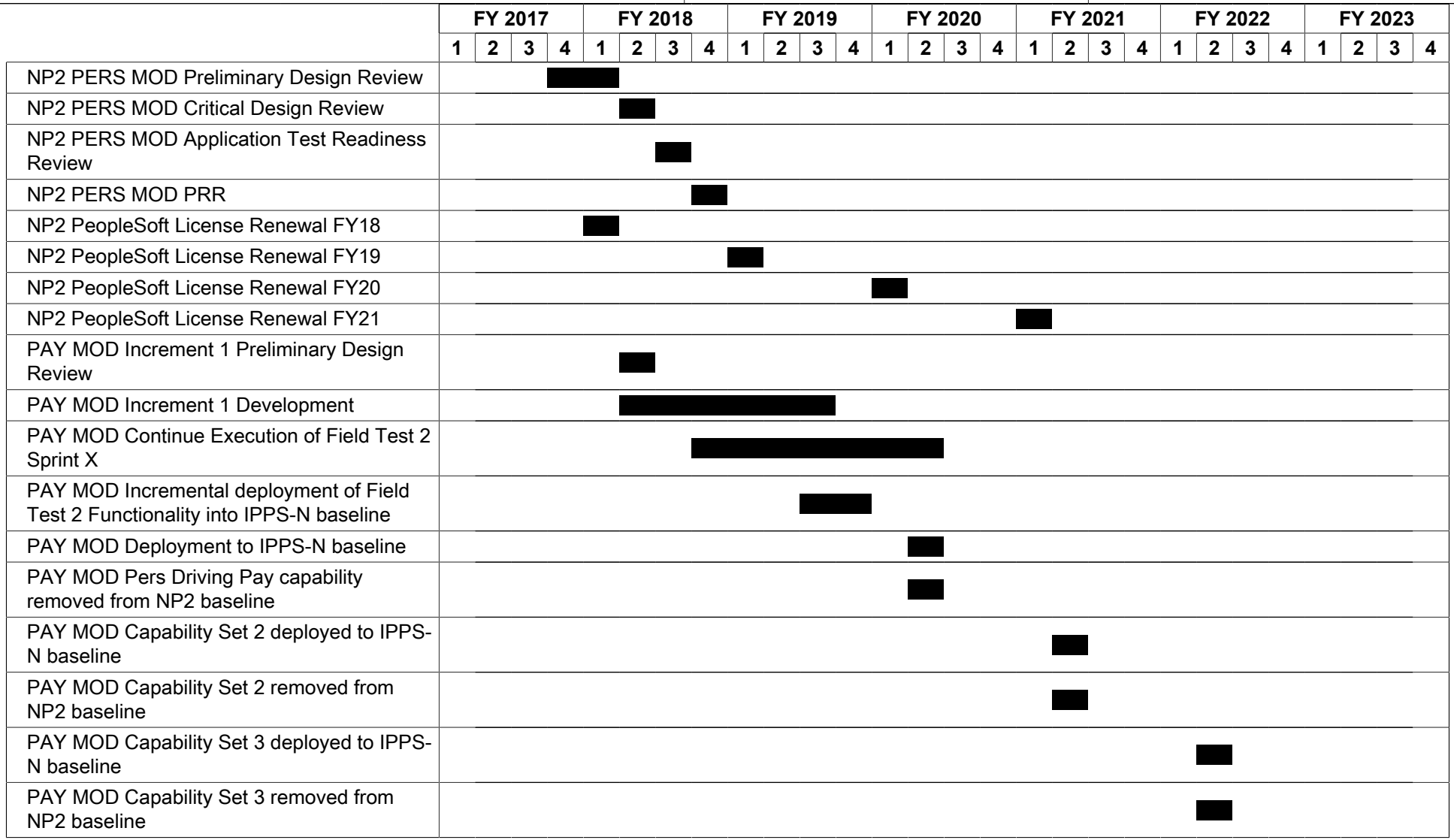

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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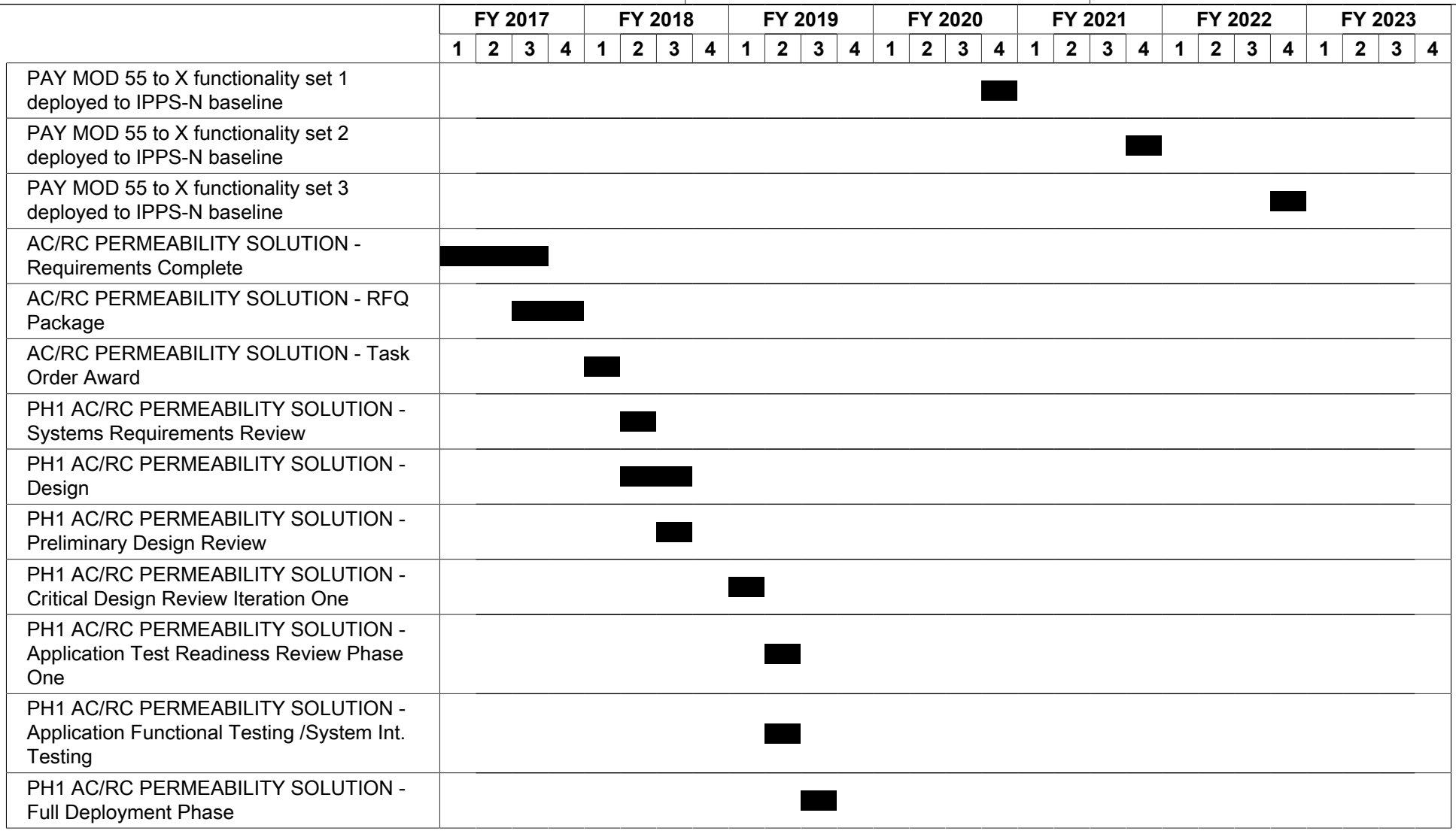

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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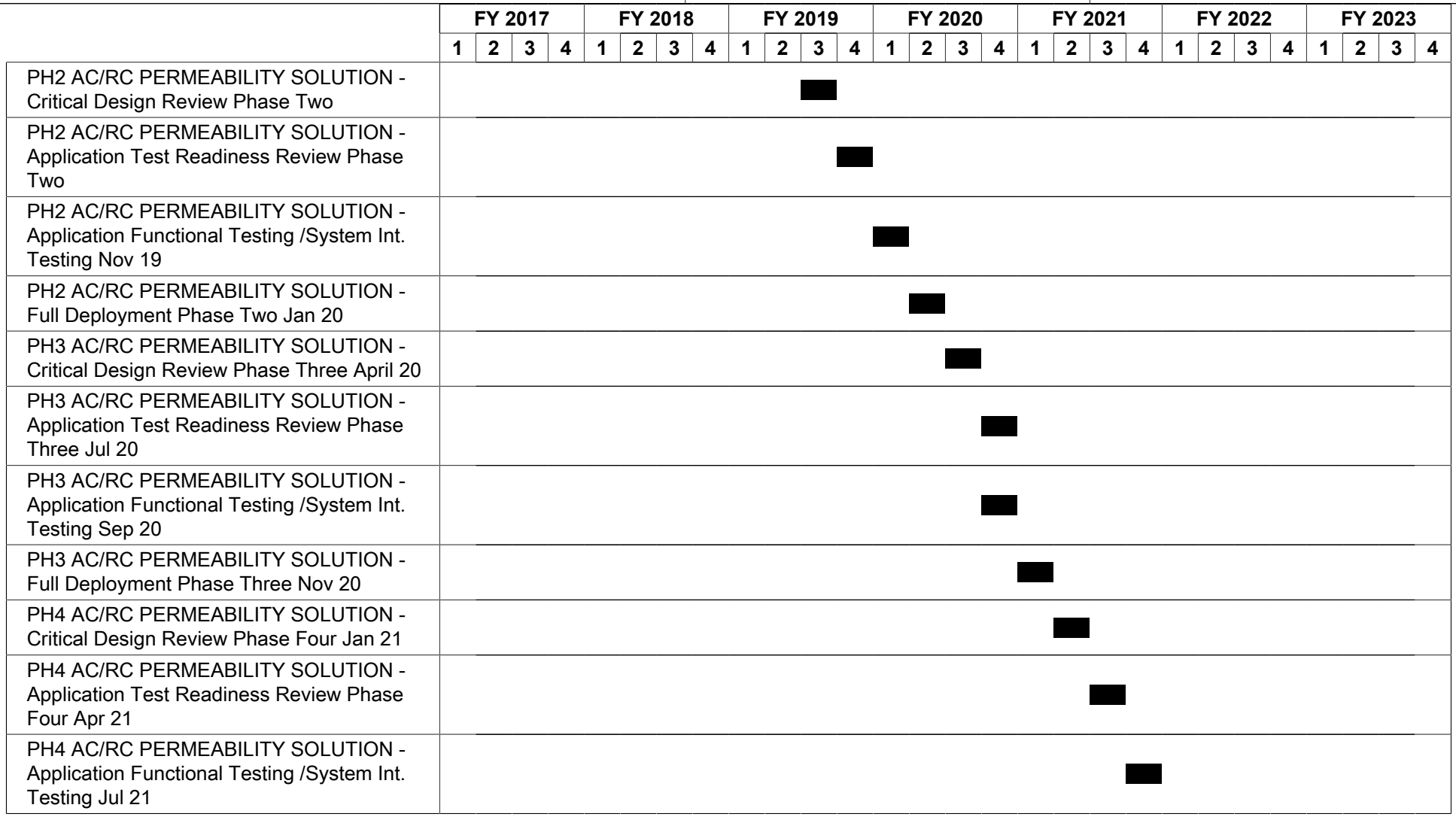

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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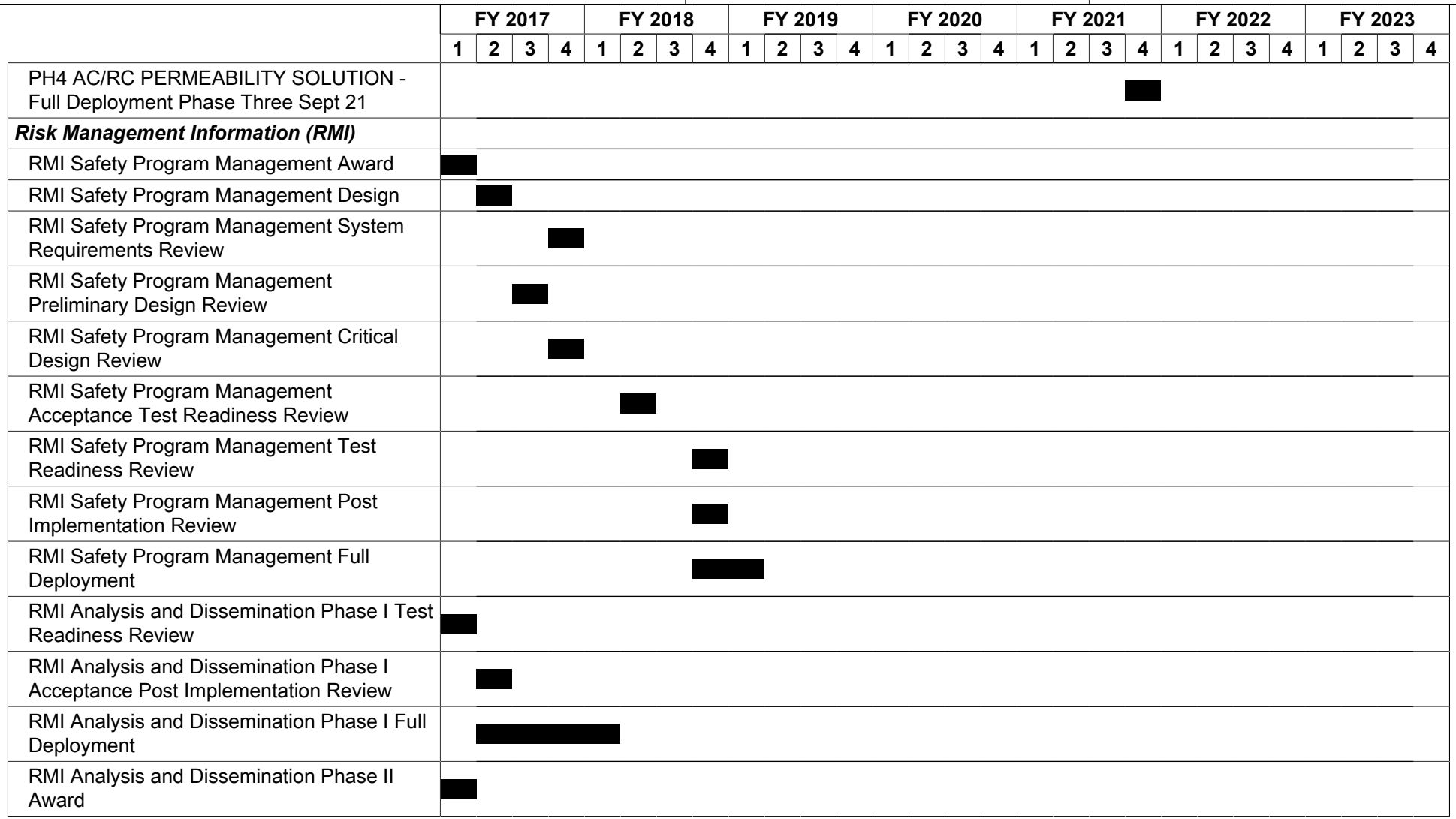

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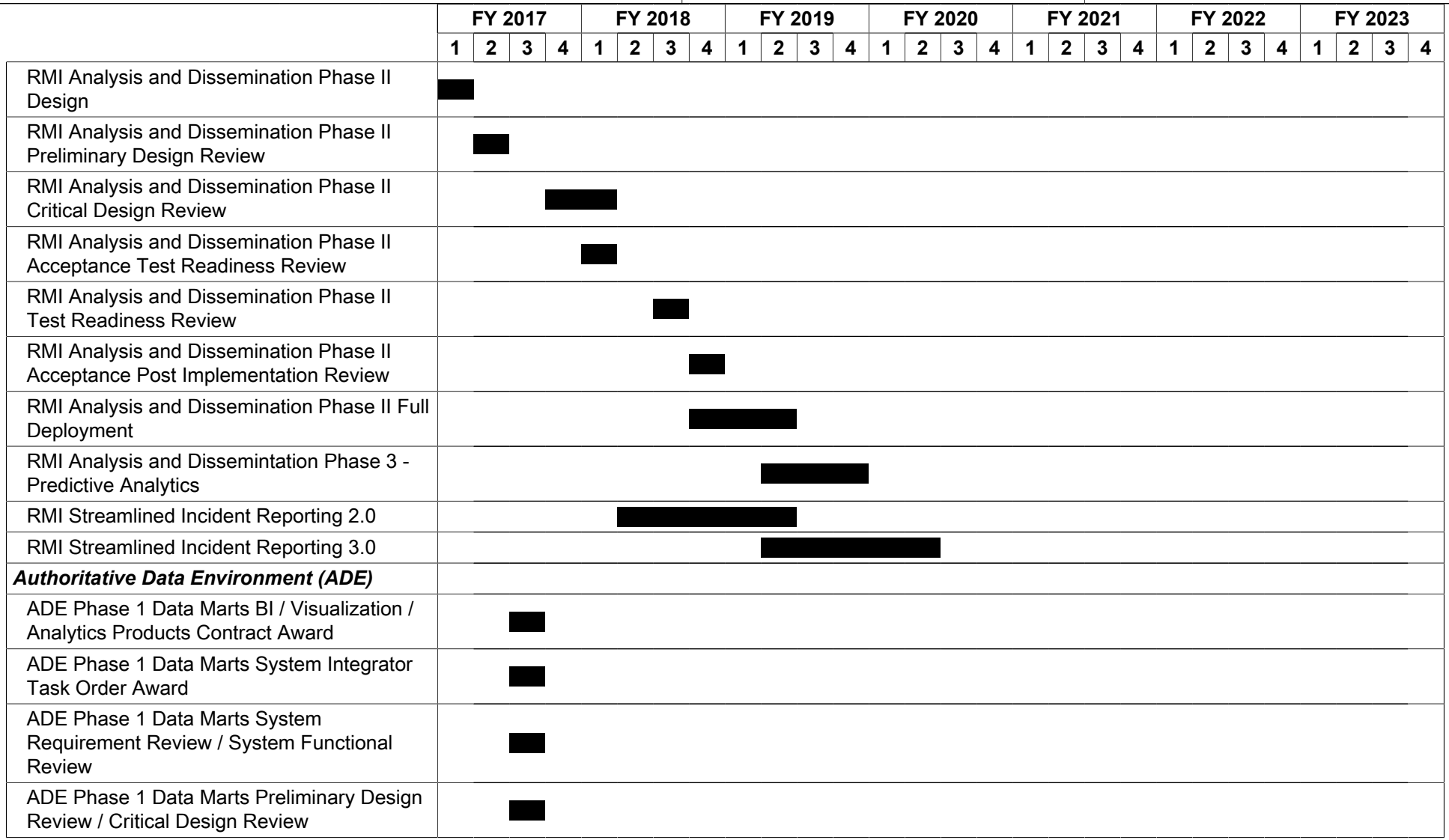

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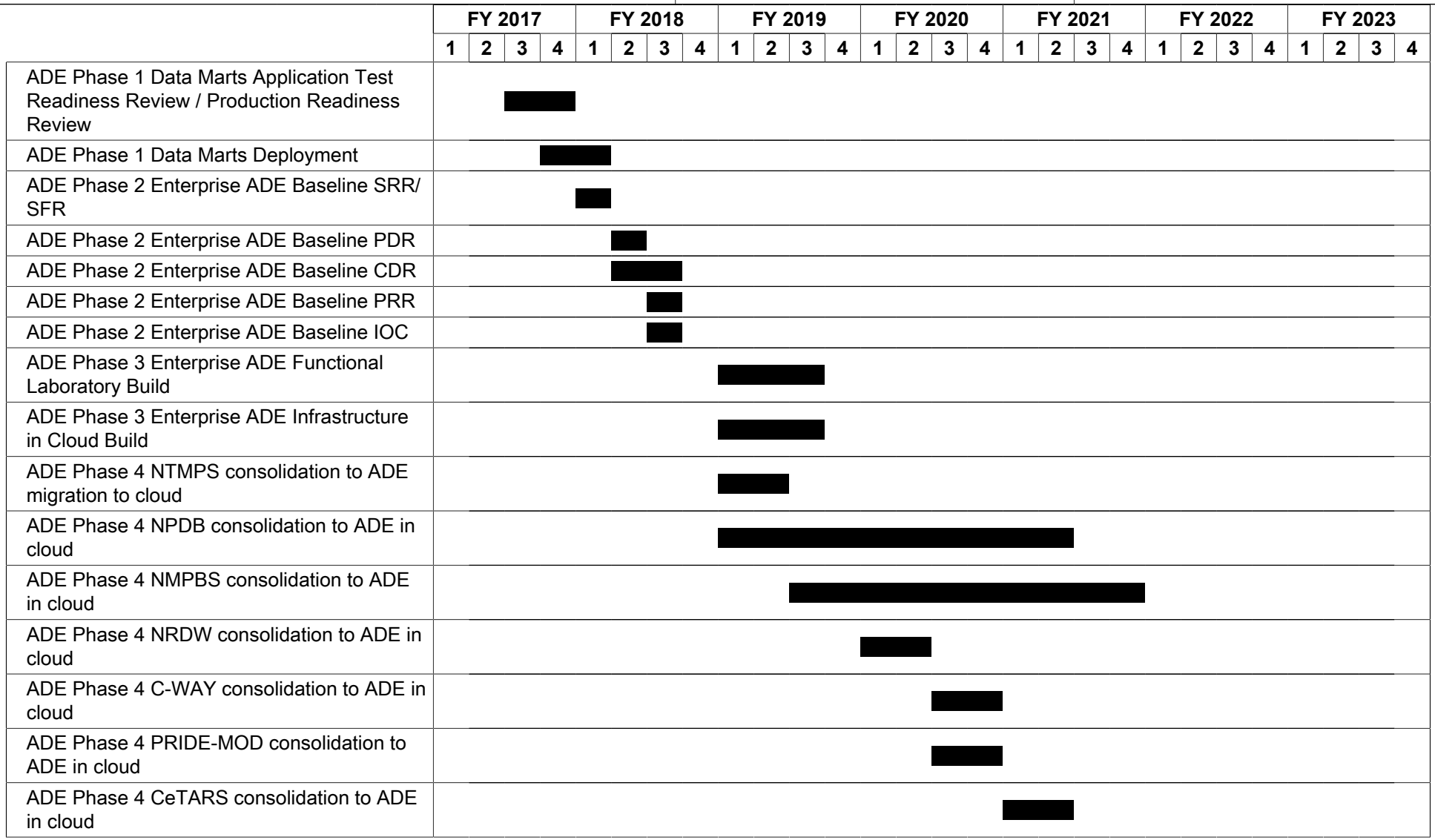

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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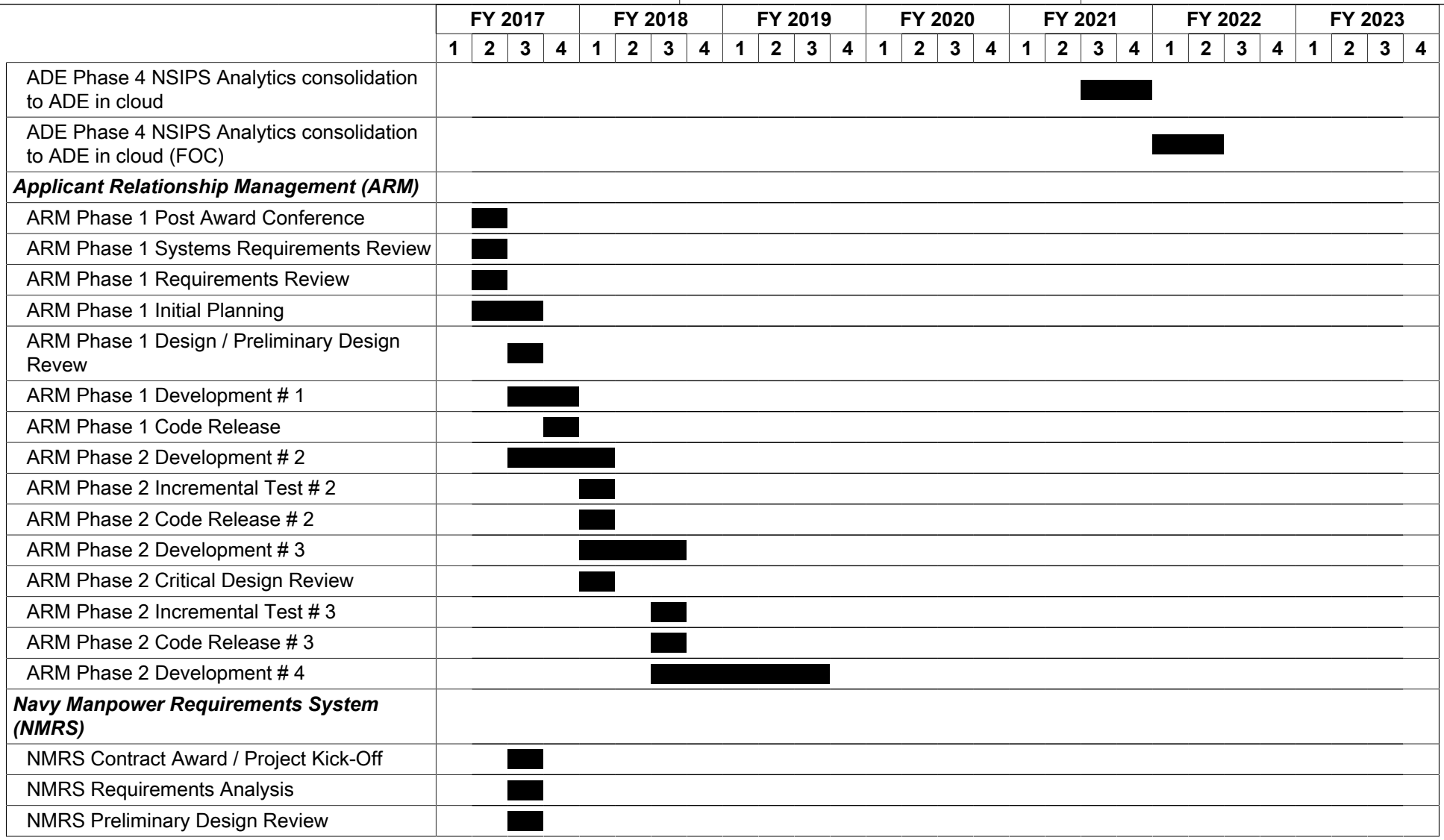

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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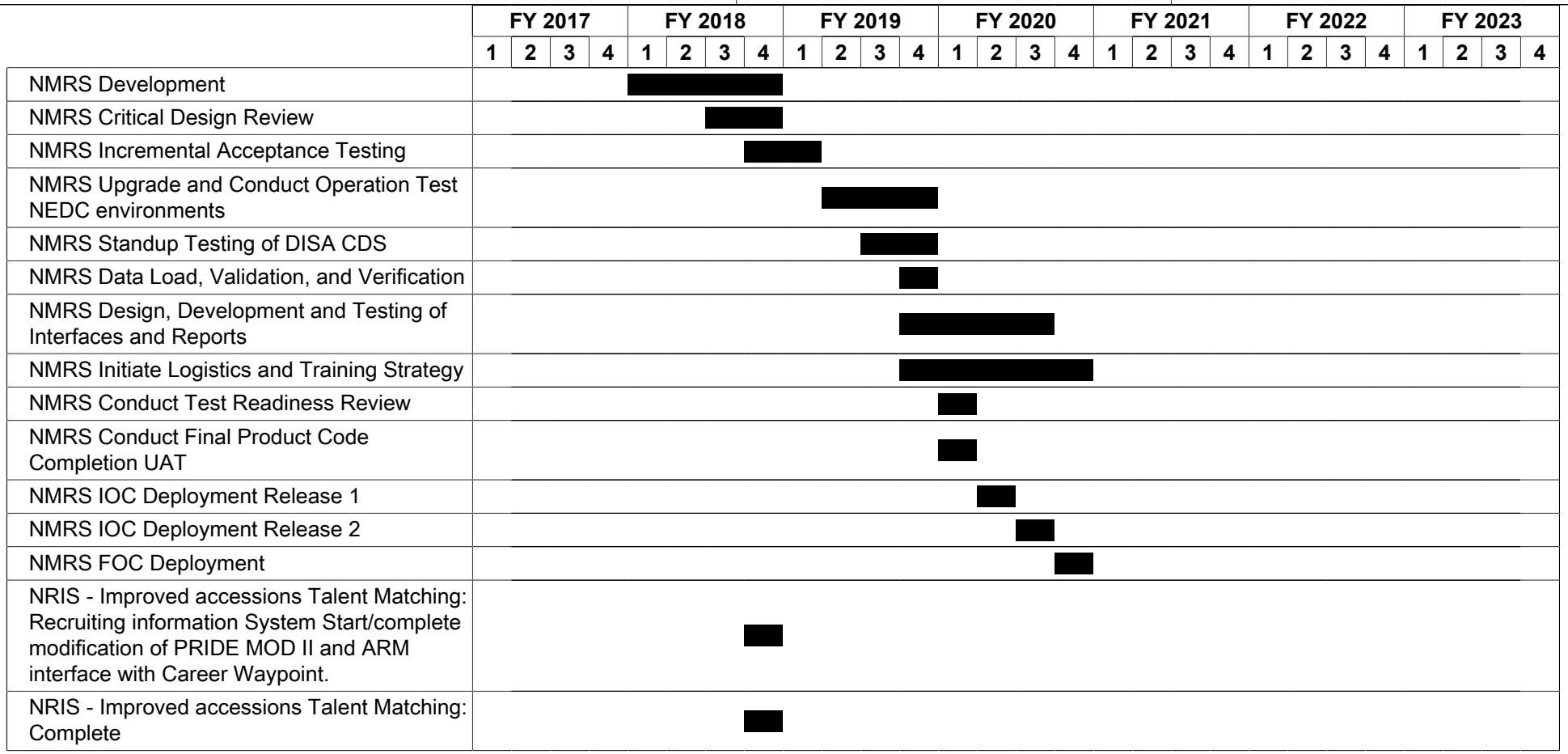

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 2905 / *BUPERS IT*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2905.L39				
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Virtual Classroom Product Licenses	3	2017	3	2017
Learning Management System - Distributed Learning (LMS-DL): LMS-DL System Integrator Task Order Award	3	2017	3	2017
Learning Management System - Distributed Learning (LMS-DL): LMS-DL System Requirement Review / System Functional Review	3	2017	3	2017
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Preliminary Design Review / Critical Design Review	3	2017	3	2017
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Application Test Readiness Review / PRR	3	2017	4	2017
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Pilot Evaluation	4	2017	2	2018
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Pilot Design Review	3	2017	3	2017
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Pilot Test Readiness Review and Pilot Operations	3	2017	2	2018
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Pilot Tech Assessment Report	2	2018	2	2018
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Career Profile Management Design	1	2018	2	2018
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Career Profile Management Preliminary Design Review	2	2018	2	2018
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Career Profile Management Development	2	2018	3	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Career Profile Management Critical Design Review	3	2018	3	2018
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Career Profile Management Testing	3	2018	3	2018
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Career Profile Management Production Readiness Review	4	2018	4	2018
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Career Profile Management Deployment	4	2018	4	2018
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Decentralized Learning Delivery & Management Design	1	2019	2	2019
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Decentralized Learning Delivery & Management Preliminary Design Review	2	2019	2	2019
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Decentralized Learning Delivery & Management Development	2	2019	3	2019
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Decentralized Learning Delivery & Management Critical Design Review	3	2019	3	2019
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Decentralized Learning Delivery & Management Testing	3	2019	3	2019
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Decentralized Learning Delivery & Management Production Readiness Review	4	2019	4	2019
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Decentralized Learning Delivery & Management Deployment	4	2019	4	2019
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Advancement Changes Design	1	2020	2	2020
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Advancement Changes Preliminary Design Review	2	2020	2	2020
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Advancement Changes Development	2	2020	3	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Advancement Changes Critical Design Review	3	2020	3	2020
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Advancement Changes Testing	3	2020	3	2020
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Advancement Changes Production Readiness Review	4	2020	4	2020
Learning Management System - Distributed Learning (LMS-DL): LMS-DL Advancement Changes Deployment	4	2020	4	2020
Analysis of Alternative Economic Analysis (AOA EA)				
Personnel Manpower Analysis for Sailor 2025 Tool Kit	1	2017	1	2019
AOA for MPT&E Cloud Services	1	2017	4	2018
AOA EA - Personnel Accountability Process Supply Chain Analytics	1	2017	4	2018
AoA Risk Reduction Field Test Study - PersPay	1	2017	1	2023
MY NAVY PORTAL (MNP)				
MNP Phase 2C Acceptance Testing	2	2019	4	2019
MNP Phase 2C Production	4	2019	4	2021
MNP Mobile Applications Updates	1	2017	4	2017
MNP Phase 2C Intermediate Development	2	2017	3	2018
MNP Develop & Integrate Identified CLE Portlets	2	2017	4	2017
MNP Finalize Platform for MNP Preferred Hosting Solution	2	2017	3	2017
MNP Phase 2C Final Development	3	2018	4	2019
MNP Gather Feedback & Incorporate	3	2017	2	2018
MNP Develop & Integrate Additional CLE Portlets	3	2018	4	2019
MNP: SPOE Sailor Self-Service Integration	1	2019	2	2020
MNP: Establish IdAM Solution	4	2018	2	2020
MNP: SPOE Integration with ADE	4	2018	4	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
MNP: SPOE Training Support Content and Page Administrators	1	2018	3	2020
MNP Planning for SPOE Migration to Commercial Cloud Hosting Solution	1	2019	1	2020
MNP Develop, Test & Release Portlets	4	2019	4	2020
MNP Develop, Test & Release Additional Portlets	4	2020	4	2021
BILLET BASED DISTRIBUTION (BBD)				
BBD Phase 1c Increment 1 Application Test Readiness Review	3	2017	2	2018
BBD Phase 1c Increment 1 User Acceptance Functional Testing	1	2017	2	2017
BBD Phase 1c Increment 1 Production Readiness Review/Production Rollout	2	2018	2	2018
BBD Phase 1c Increment 2 Detailed Requirements Analysis	1	2017	1	2017
BBD Phase 1c Increment 2 Preliminary Design Review	2	2017	2	2017
BBD Phase 1c Increment 2 Development	2	2017	4	2018
BBD Phase 2 Enlisted Optimization and Slating Critical Design Review	4	2018	4	2018
BBD Phase 2 Enlisted Optimization and Slating Application Test Readiness Review	1	2019	1	2019
BBD Phase 2 Enlisted Optimization and Slating User Acceptance Functional Testing	1	2019	3	2019
BBD Phase 2 Enlisted Optimization and Slating Production Readiness Review/ Production Rollout	4	2019	4	2019
BBD Phase 2 Officer Functionality Detailed Requirements Analysis	2	2018	3	2018
BBD Phase 2 Officer Functionality Preliminary Design Review	3	2018	3	2018
BBD Phase 2 Officer Functionality Development	3	2018	4	2018
BBD Phase 2 Officer Functionality Critical Design Review	4	2018	4	2018
BBD Phase 2 Officer Functionality Application Test Readiness Review	1	2019	1	2019
BBD Phase 2 Officer Functionality User Acceptance Functional Testing	1	2019	3	2019
BBD Phase 2 Officer Functionality Production Readiness Review/Production Rollout	4	2019	4	2019
BBD Officer Optimization and Slating Detailed Requirements Analysis	3	2019	3	2019
BBD Officer Optimization and Slating Preliminary Design Review	1	2020	1	2020
BBD Officer Optimization and Slating Development	2	2020	4	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
BBD Officer Optimization and Slating Critical Design Review	4	2020	4	2020
BBD Officer Optimization and Slating Application Test Readiness Review	1	2021	1	2021
BBD Officer Optimization and Slating User Acceptance Functional Testing	1	2021	3	2021
BBD Officer Optimization and Slating Production Readiness Review/Proiduction Rollout	4	2021	4	2021
BBD Enlisted Assignment Detailed Requirements Analysis	3	2019	3	2019
BBD Enlisted Assignment Preliminary Design Review	1	2020	1	2020
BBD Enlisted Assignment Development	2	2020	4	2020
BBD Enlisted Assignment Critical Design Review	4	2020	4	2020
BBD Enlisted Assignment Application Test Readiness Review	1	2021	1	2021
BBD Enlisted Assignment User Accepttance Functional Testing	1	2021	3	2021
BBD Enlisted Assignment Production Readiness Review/Production Rollout	4	2021	4	2021
NAVY PERSONNEL AND PAY (NP2)				
NP2 Tri-Service License Renewal FY17	1	2017	1	2017
NP2 - Acquisition Authority Decision Milestone B	1	2017	1	2017
NP2 Contract Award for Deferred SW changes	2	2017	2	2017
NP2 PERS MOD System Requirements Review/System Functional Review,	3	2017	3	2017
NP2 PERS MOD Preliminary Design Review	4	2017	1	2018
NP2 PERS MOD Critical Design Review	2	2018	2	2018
NP2 PERS MOD Application Test Readiness Review	3	2018	3	2018
NP2 PERS MOD PRR	4	2018	4	2018
NP2 PeopleSoft License Renewal FY18	1	2018	1	2018
NP2 PeopleSoft License Renewal FY19	1	2019	1	2019
NP2 PeopleSoft License Renewal FY20	1	2020	1	2020
NP2 PeopleSoft License Renewal FY21	1	2021	1	2021
PAY MOD Increment 1 Preliminary Design Review	2	2018	2	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
PAY MOD Increment 1 Development	2	2018	3	2019
PAY MOD Continue Execution of Field Test 2 Sprint X	4	2018	2	2020
PAY MOD Incremental deployment of Field Test 2 Functionality into IPPS-N baseline	3	2019	4	2019
PAY MOD Deployment to IPPS-N baseline	2	2020	2	2020
PAY MOD Pers Driving Pay capability removed from NP2 baseline	2	2020	2	2020
PAY MOD Capability Set 2 deployed to IPPS-N baseline	2	2021	2	2021
PAY MOD Capability Set 2 removed from NP2 baseline	2	2021	2	2021
PAY MOD Capability Set 3 deployed to IPPS-N baseline	2	2022	2	2022
PAY MOD Capability Set 3 removed from NP2 baseline	2	2022	2	2022
PAY MOD 55 to X functionality set 1 deployed to IPPS-N baseline	4	2020	4	2020
PAY MOD 55 to X functionality set 2 deployed to IPPS-N baseline	4	2021	4	2021
PAY MOD 55 to X functionality set 3 deployed to IPPS-N baseline	4	2022	4	2022
AC/RC PERMEABILITY SOLUTION - Requirements Complete	1	2017	3	2017
AC/RC PERMEABILITY SOLUTION - RFQ Package	3	2017	4	2017
AC/RC PERMEABILITY SOLUTION - Task Order Award	1	2018	1	2018
PH1 AC/RC PERMEABILITY SOLUTION - Systems Requirements Review	2	2018	2	2018
PH1 AC/RC PERMEABILITY SOLUTION - Design	2	2018	3	2018
PH1 AC/RC PERMEABILITY SOLUTION - Preliminary Design Review	3	2018	3	2018
PH1 AC/RC PERMEABILITY SOLUTION - Critical Design Review Iteration One	1	2019	1	2019
PH1 AC/RC PERMEABILITY SOLUTION - Application Test Readiness Review Phase One	2	2019	2	2019
PH1 AC/RC PERMEABILITY SOLUTION - Application Functional Testing /System Int. Testing	2	2019	2	2019
PH1 AC/RC PERMEABILITY SOLUTION - Full Deployment Phase	3	2019	3	2019
PH2 AC/RC PERMEABILITY SOLUTION - Critical Design Review Phase Two	3	2019	3	2019

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
PH2 AC/RC PERMEABILITY SOLUTION - Application Test Readiness Review Phase Two	4	2019	4	2019
PH2 AC/RC PERMEABILITY SOLUTION - Application Functional Testing /System Int. Testing Nov 19	1	2020	1	2020
PH2 AC/RC PERMEABILITY SOLUTION - Full Deployment Phase Two Jan 20	2	2020	2	2020
PH3 AC/RC PERMEABILITY SOLUTION - Critical Design Review Phase Three April 20	3	2020	3	2020
PH3 AC/RC PERMEABILITY SOLUTION - Application Test Readiness Review Phase Three Jul 20	4	2020	4	2020
PH3 AC/RC PERMEABILITY SOLUTION - Application Functional Testing /System Int. Testing Sep 20	4	2020	4	2020
PH3 AC/RC PERMEABILITY SOLUTION - Full Deployment Phase Three Nov 20	1	2021	1	2021
PH4 AC/RC PERMEABILITY SOLUTION - Critical Design Review Phase Four Jan 21	2	2021	2	2021
PH4 AC/RC PERMEABILITY SOLUTION - Application Test Readiness Review Phase Four Apr 21	3	2021	3	2021
PH4 AC/RC PERMEABILITY SOLUTION - Application Functional Testing /System Int. Testing Jul 21	4	2021	4	2021
PH4 AC/RC PERMEABILITY SOLUTION - Full Deployment Phase Three Sept 21	4	2021	4	2021
Risk Management Information (RMI)				
RMI Safety Program Management Award	1	2017	1	2017
RMI Safety Program Management Design	2	2017	2	2017
RMI Safety Program Management System Requirements Review	4	2017	4	2017
RMI Safety Program Management Preliminary Design Review	3	2017	3	2017
RMI Safety Program Management Critical Design Review	4	2017	4	2017
RMI Safety Program Management Acceptance Test Readiness Review	2	2018	2	2018
RMI Safety Program Management Test Readiness Review	4	2018	4	2018
RMI Safety Program Management Post Implementation Review	4	2018	4	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
RMI Safety Program Management Full Deployment	4	2018	1	2019
RMI Analysis and Dissemination Phase I Test Readiness Review	1	2017	1	2017
RMI Analysis and Dissemination Phase I Acceptance Post Implementation Review	2	2017	2	2017
RMI Analysis and Dissemination Phase I Full Deployment	2	2017	1	2018
RMI Analysis and Dissemination Phase II Award	1	2017	1	2017
RMI Analysis and Dissemination Phase II Design	1	2017	1	2017
RMI Analysis and Dissemination Phase II Preliminary Design Review	2	2017	2	2017
RMI Analysis and Dissemination Phase II Critical Design Review	4	2017	1	2018
RMI Analysis and Dissemination Phase II Acceptance Test Readiness Review	1	2018	1	2018
RMI Analysis and Dissemination Phase II Test Readiness Review	3	2018	3	2018
RMI Analysis and Dissemination Phase II Acceptance Post Implementation Review	4	2018	4	2018
RMI Analysis and Dissemination Phase II Full Deployment	4	2018	2	2019
RMI Analysis and Dissemintation Phase 3 - Predictive Analytics	2	2019	4	2019
RMI Streamlined Incident Reporting 2.0	2	2018	2	2019
RMI Streamlined Incident Reporting 3.0	2	2019	2	2020
Authoritative Data Environment (ADE)				
ADE Phase 1 Data Marts BI / Visualization / Analytics Products Contract Award	3	2017	3	2017
ADE Phase 1 Data Marts System Integrator Task Order Award	3	2017	3	2017
ADE Phase 1 Data Marts System Requirement Review / System Functional Review	3	2017	3	2017
ADE Phase 1 Data Marts Preliminary Design Review / Critical Design Review	3	2017	3	2017
ADE Phase 1 Data Marts Application Test Readiness Review / Production Readiness Review	3	2017	4	2017
ADE Phase 1 Data Marts Deployment	4	2017	1	2018
ADE Phase 2 Enterprise ADE Baseline SRR/SFR	1	2018	1	2018
ADE Phase 2 Enterprise ADE Baseline PDR	2	2018	2	2018
ADE Phase 2 Enterprise ADE Baseline CDR	2	2018	3	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ADE Phase 2 Enterprise ADE Baseline PRR	3	2018	3	2018
ADE Phase 2 Enterprise ADE Baseline IOC	3	2018	3	2018
ADE Phase 3 Enterprise ADE Functional Laboratory Build	1	2019	3	2019
ADE Phase 3 Enterprise ADE Infrastructure in Cloud Build	1	2019	3	2019
ADE Phase 4 NTMPS consolidation to ADE migration to cloud	1	2019	2	2019
ADE Phase 4 NPDB consolidation to ADE in cloud	1	2019	2	2021
ADE Phase 4 NMPBS consolidation to ADE in cloud	3	2019	4	2021
ADE Phase 4 NRDW consolidation to ADE in cloud	1	2020	2	2020
ADE Phase 4 C-WAY consolidation to ADE in cloud	3	2020	4	2020
ADE Phase 4 PRIDE-MOD consolidation to ADE in cloud	3	2020	4	2020
ADE Phase 4 CeTARS consolidation to ADE in cloud	1	2021	2	2021
ADE Phase 4 NSIPS Analytics consolidation to ADE in cloud	3	2021	4	2021
ADE Phase 4 NSIPS Analytics consolidation to ADE in cloud (FOC)	1	2022	2	2022
Applicant Relationship Management (ARM)				
ARM Phase 1 Post Award Conference	2	2017	2	2017
ARM Phase 1 Systems Requirements Review	2	2017	2	2017
ARM Phase 1 Requirements Review	2	2017	2	2017
ARM Phase 1 Initial Planning	2	2017	3	2017
ARM Phase 1 Design / Preliminary Design Revew	3	2017	3	2017
ARM Phase 1 Development # 1	3	2017	4	2017
ARM Phase 1 Code Release	4	2017	4	2017
ARM Phase 2 Development # 2	3	2017	1	2018
ARM Phase 2 Incremental Test # 2	1	2018	1	2018
ARM Phase 2 Code Release # 2	1	2018	1	2018
ARM Phase 2 Development # 3	1	2018	3	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ARM Phase 2 Critical Design Review	1	2018	1	2018
ARM Phase 2 Incremental Test # 3	3	2018	3	2018
ARM Phase 2 Code Release # 3	3	2018	3	2018
ARM Phase 2 Development # 4	3	2018	3	2019
Navy Manpower Requirements System (NMRS)				
NMRS Contract Award / Project Kick-Off	3	2017	3	2017
NMRS Requirements Analysis	3	2017	3	2017
NMRS Preliminary Design Review	3	2017	3	2017
NMRS Development	1	2018	4	2018
NMRS Critical Design Review	3	2018	4	2018
NMRS Incremental Acceptance Testing	4	2018	1	2019
NMRS Upgrade and Conduct Operation Test NEDC environments	2	2019	4	2019
NMRS Standup Testing of DISA CDS	3	2019	4	2019
NMRS Data Load, Validation, and Verification	4	2019	4	2019
NMRS Design, Development and Testing of Interfaces and Reports	4	2019	3	2020
NMRS Initiate Logistics and Training Strategy	4	2019	4	2020
NMRS Conduct Test Readiness Review	1	2020	1	2020
NMRS Conduct Final Product Code Completion UAT	1	2020	1	2020
NMRS IOC Deployment Release 1	2	2020	2	2020
NMRS IOC Deployment Release 2	3	2020	3	2020
NMRS FOC Deployment	4	2020	4	2020
NRIS - Improved accessions Talent Matching: Recruiting information System Start/ complete modification of PRIDE MOD II and ARM interface with Career Waypoint.	4	2018	4	2018
NRIS - Improved accessions Talent Matching: Complete	4	2018	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
3167: *Joint Technical Data Integration (JTDI)*	30.215	5.327	2.533	3.883	-	3.883	4.944	4.288	4.036	4.117	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Joint Technical Data Integration (JTDI) Program - JTDI funding supports the evaluation, testing and integration to develop a JTDI Commercial Off-The-Shelf (COTS) solution for installation on Carrier and Amphibious Assault class ships and up to 104 Navy/Marine Corp aviation activities. JTDI is a digital technical data access, delivery and local Organizational & Intermediate level library management toolset and telemaintenance collaboration process enabler. 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. It facilitates the transition of the Joint Distance Support and Response Advanced Concept Technology Demonstration for telemaintenance and provides for process efficiencies to support ongoing Aviation Fleet Technical Representative reductions.

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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Joint Technical Data Integration (JTDI)	1.298	0.952	1.413	0.000	1.413
Articles:	-	-	-	-	-
FY 2018 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Conduct development efforts associated with a major release of fully deployed COTS intensive JTDI system. Conduct COTS requirements definition, evaluation, integration, and testing of annual baseline releases. Conduct technology insertion of the JTDI system. ***FY 2019 Base Plans:*** Conduct development and redeployment efforts associated with a major release of fully deployed GOTS intensive JTDI system Version 2.0.6.5. Conduct COTS requirements definition, evaluation, integration, and testing of annual baseline releases. Perform development and testing in support of integration and consolidation of the Next Generation - Technical Manual Management Program (NG-TMMP) with the JTDI Program. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** JTDI increase in is due to the development of JTDI Data Transport Battlegroup Survivability Enhancements ensuring Tech Data is available for fleet users in degraded mode networks or during complete loss of access to land-based top tier servers commencing in FY18 and completing in FY20. It will be used to develop the JTDI Standard Data Repository providing a Big Data Storage and access solution enabling an advanced Enterprise Common CBM+ data analysis solution. This development will begin in Fy18 and is scheduled for Production in FY20.					
Title: Marine Aviation Logistics Enterprise Information Technology (MAL-EIT)	4.029	1.581	2.470	0.000	2.470
Articles:	-	-	-	-	-
FY 2018 Plans: Complete software development and test and evaluation of Logistics Planning Tool/MAL-EIT 3.0 solution for deployment to the fleet in FY19. ***FY 2019 Base Plans:*** Accelerate and complete fielding and deployment of Logistics Planning Tool/MAL-EIT 3.0 to meet Full Operation Capability in FY19 and begin software development of Logistics Planning Tool/MAL-EIT 3.1 ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:***					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
MAL-EIT FY19 increase for Wyle support is 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.					
Accomplishments/Planned Programs Subtotals	5.327	2.533	3.883	0.000	3.883

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• OPN/4268/JTDI: *Joint Technical Data Integration (JTDI) Other Aviation Support Equipment*	0.784	2.134	2.340	-	2.340	2.365	2.408	2.453	2.502	Continuing	Continuing
• OPN/4268/MALSP II: *Marine Aviation Logistics Support Program (MALSP II) Aviation Support*	0.673	0.200	0.219	-	0.219	0.138	0.136	0.134	0.144	Continuing	Continuing

Remarks

D. Acquisition Strategy

Joint Technical Data Integration (JTDI) Program - The management approach includes the Program Management Office residing in NAVAIR with Milestone Decision Authority delegated to the NAVAIR Command Information Officer (CIO). 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 Program Management Office residing within NAVAIR 6.0 and Milestone Decision Authority delegated to NAVAIR 6.7. 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.

E. Performance Metrics

Joint Technical Data Integration (JTDI) and Marine Aviation Logistics Enterprise Information Technology (MAL-EIT)- Successfully achieve government testing of annual software release.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development for Joint Technical Data Integration (JTDI)	C/FFP	ARANEA : Huntsville, AL	7.688	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Software Development for JTDI	MIPR	DTIC : Fort Belvior, VA	1.190	1.299	Jan 2017	0.461	Jan 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Software Development/ Hardware Integration for Marine Aviation Logistics Enterprise Information Technology (MAL-EIT)	C/CPFF	Wyle : Patuxent River, MD	3.882	2.055	Feb 2017	0.334	Jan 2018	1.180	Jan 2019	-		1.180	Continuing	Continuing	Continuing
Software Development/ Hardware Integration for MAL-EIT	C/T&M	Applied Research : Penn State	1.015	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Prior year support no longer funded in the FYDP	Various	Various : Various	7.638	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Software Development/ Hardware Integration MAL-EIT	WR	NAWCAD : Patuxent River, MD	0.682	0.471	Nov 2016	0.531	Nov 2017	0.395	Nov 2018	-		0.395	Continuing	Continuing	Continuing
Software Development/ Hardware Integration MAL-EIT	WR	NEDC : New Orleans, LA	0.261	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Development/Software Integration - MAL-EIT	WR	NAWCWD : China Lake	0.700	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Development/Software Integration - MAL-EIT	WR	NEDC : Patuxent River, MD	0.000	0.045	Dec 2016	0.160	Oct 2017	0.100	Oct 2018	-		0.100	Continuing	Continuing	Continuing
Software Development for JTDI	C/CPFF	Control Point Corporation : Patuxent River, MD	0.000	0.000		0.000		0.550	Apr 2019	-		0.550	Continuing	Continuing	Continuing
		Subtotal	23.056	3.870		1.486		2.225		-		2.225	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation for MAL-EIT	WR	SPAWAR : Norfolk, VA	1.629	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation for MAL-EIT	C/CPFF	Wyle : Patuxent River, MD	0.413	0.473	Feb 2017	0.077	Jan 2018	0.272	Jan 2019	-		0.272	Continuing	Continuing	Continuing
Prior year Test & Eval no longer funded in the FYDP	Various	Various : Various	0.909	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation, MAL-EIT	WR	NAWCAD : Patuxent River, MD	0.333	0.146	Nov 2016	0.133	Nov 2017	0.076	Nov 2018	-		0.076	Continuing	Continuing	Continuing
Developmental Test & Evaluation, MAL-EIT	WR	NSWC : Corona, CA	0.000	0.025	Nov 2016	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation JDTI	C/CPFF	Control Point Corporation : Patuxent River, MD	0.000	0.000		0.000		0.500	Jan 2019	-		0.500	Continuing	Continuing	Continuing
		Subtotal	3.284	0.644		0.210		0.848		-		0.848	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support for Marine Aviation Logistics Enterprise Information Technology (MAL-EIT)	WR	SPAWAR : Norfolk, VA	0.832	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Management Support MAL-EIT	WR	NAWCAD : Patuxent River, MD	0.216	0.108	Nov 2016	0.212	Nov 2017	0.072	Nov 2018	-		0.072	Continuing	Continuing	Continuing
Program Management Support MAL-EIT	C/CPFF	Wyle : Patuxent River, MD	0.410	0.630	Feb 2017	0.103	Jan 2018	0.345	Jan 2019	-		0.345	Continuing	Continuing	Continuing
Prior year Mgmt Svcs Cost no longer funded in the FYDP	Various	Various : Various	0.473	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
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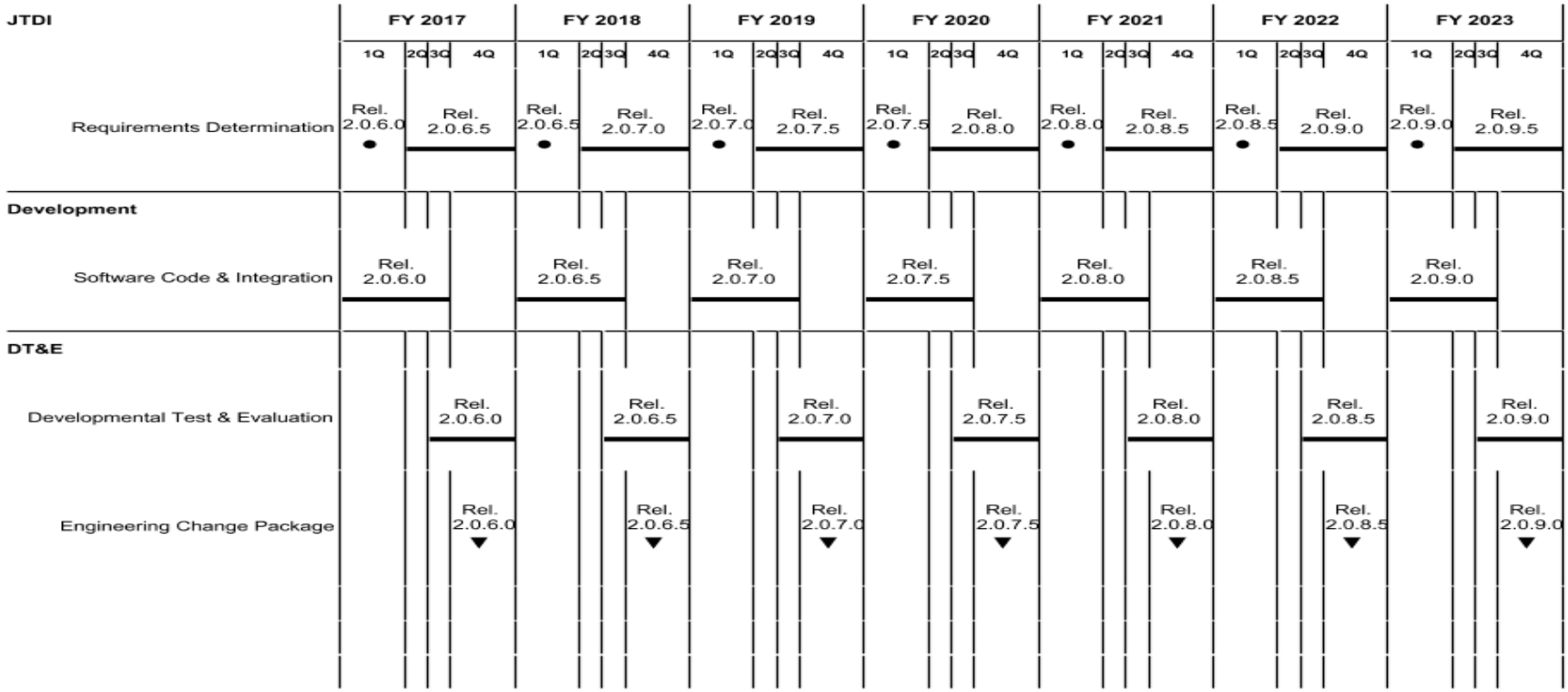
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering Support - Joint Technical Data Integration	WR	NAWCAD : Patuxent River, MD	1.894	0.000		0.492	Nov 2017	0.363	Nov 2018	-		0.363	Continuing	Continuing	Continuing
Program Management Support - TRAVEL - MAL-EIT	WR	NAVAIR HQ : Patuxent River, MD	0.050	0.056	Oct 2016	0.030	Oct 2017	0.030	Oct 2018	-		0.030	Continuing	Continuing	Continuing
Program Management Support MAL-EIT	WR	W4MK Armament RDEC : Pacatiny Arsenal, NJ	0.000	0.019	Jun 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	3.875	0.813		0.837		0.810		-		0.810	Continuing	Continuing	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	30.215	5.327		2.533		3.883		-		3.883	Continuing	Continuing	N/A

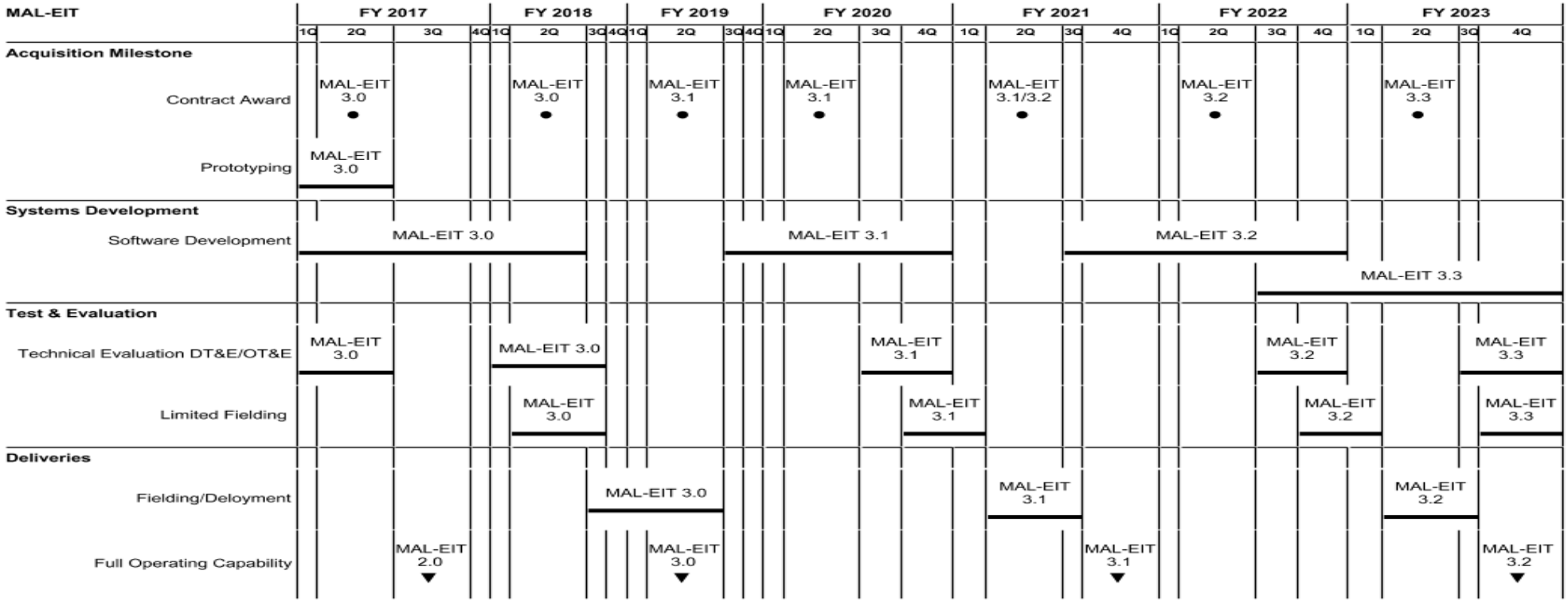
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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)*



2019OSD - 0605013N - 3167

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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)*



2019OSD - 0605013N - 3167

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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				
Requirements Determination: Release 2.0.6.5	2	2017	4	2017
Requirements Determination: Release 2.0.7.0	2	2018	4	2018
Requirements Determination: Release 2.0.7.5	2	2019	4	2019
Requirements Determination: Release 2.0.8.0	2	2020	4	2020
Requirements Determination: Release 2.0.8.5	2	2021	4	2021
Requirements Determination: Release 2.0.9.0	2	2022	4	2022
Requirements Determination: Release 2.0.9.5	2	2023	4	2023
Requirements Determination: Contract Award, Release 2.0.6.0	1	2017	1	2017
Requirements Determination: Contract Award, Release 2.0.6.5	1	2018	1	2018
Requirements Determination: Contract Award, Release 2.0.7.0	1	2019	1	2019
Requirements Determination: Contract Award, Release 2.0.7.5	1	2020	1	2020
Requirements Determination: Contract Aware, Release 2.0.8.0	1	2021	1	2021
Requirements Determination: Contract Aware, Release 2.0.8.5	1	2022	1	2022
Requirements Determination: Contract Aware, Release 2.0.9.0	1	2023	1	2023
Development: Software Code & Integration: Release 2.0.6.0	1	2017	3	2017
Development: Software Code & Integration: Release 2.0.6.5	1	2018	3	2018
Development: Software Code & Integration: Release 2.0.7.0	1	2019	3	2019
Development: Software Code & Integration: Release 2.0.7.5	1	2020	3	2020
Development: Software Code & Integration: Release 2.0.8.0	1	2021	3	2021
Development: Software Code & Integration: Release 2.0.8.5	1	2022	3	2022
Development: Software Code & Integration: Release 2.0.9.0	1	2023	3	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
DT&E: Developmental Test & Evaluation: Release 2.0.6.0	3	2017	4	2017
DT&E: Developmental Test & Evaluation: Release 2.0.6.5	3	2018	4	2018
DT&E: Developmental Test & Evaluation: Release 2.0.7.0	3	2019	4	2019
DT&E: Developmental Test & Evaluation: Release 2.0.7.5	3	2020	4	2020
DT&E: Developmental Test & Evaluation: Release 2.0.8.0	3	2021	4	2021
DT&E: Developmental Test & Evaluation: Release 2.0.8.5	3	2022	4	2022
DT&E: Developmental Test & Evaluation: Release 2.0.9.0	3	2023	4	2023
DT&E: Engineering Change Package: Release 2.0.6.0	4	2017	4	2017
DT&E: Engineering Change Package: Release 2.0.6.5	4	2018	4	2018
DT&E: Engineering Change Package: Release 2.0.7.0	4	2019	4	2019
DT&E: Engineering Change Package: Release 2.0.7.5	4	2020	4	2020
DT&E: Engineering Change Package: Release 2.0.8.0	4	2021	4	2021
DT&E: Engineering Change Package: Release 2.0.8.5	4	2022	4	2022
DT&E: Engineering Change Package: Release 2.0.9.0	4	2023	4	2023
MAL-EIT				
Acquisition Milestone: Contract Award: Contract Award (5)	2	2017	2	2017
Acquisition Milestone: Contract Award: Contract Award (6)	2	2018	2	2018
Acquisition Milestone: Contract Award: Contract Award (7)	2	2019	2	2019
Acquisition Milestone: Contract Award: Contract Award (8)	2	2020	2	2020
Acquisition Milestone: Contract Award: Contract Award (9)	2	2021	2	2021
Acquisition Milestone: Contract Award: Contract Award (10)	2	2022	2	2022
Acquisition Milestone: Contract Award: Contract Award (11)	2	2023	2	2023
Acquisition Milestone: Prototyping: Prototyping (3)	1	2017	2	2017
Systems Development: Software Development: Software Development (3)	1	2017	2	2018
Systems Development: Software Development: Software Development (4)	3	2019	4	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
Systems Development: Software Development: Software Development (5)	3	2021	4	2022
Systems Development: Software Development: Software Development (6)	3	2022	4	2023
Test & Evaluation: Technical Evaluation DT&E/OT&E: Technical Evaluation DT&E (3)	1	2017	2	2017
Test & Evaluation: Technical Evaluation DT&E/OT&E: Technical Evaluation DT&E/ OT&E (4)	1	2018	3	2018
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: Technical Evaluation DT&E/OT&E: Technical Evaluation DT&E/ OT&E (7)	3	2023	4	2023
Test & Evaluation: Limited Fielding: Limited Fielding (3)	2	2018	3	2018
Test & Evaluation: Limited Fielding: Limited Fielding (4)	4	2020	1	2021
Test & Evaluation: Limited Fielding: Limited Fielding (5)	4	2022	1	2023
Test & Evaluation: Limited Fielding: Limited Fielding (6)	4	2023	4	2023
Deliveries: Fielding/Deloyment: Fielding/Deployment (2)	3	2018	2	2019
Deliveries: Fielding/Deloyment: Fielding/Deployment (3)	2	2021	3	2021
Deliveries: Fielding/Deloyment: Fielding/Deployment (4)	2	2023	3	2023
Deliveries: Full Operating Capability: Full Operating Capability (3)	2	2019	2	2019
Deliveries: Full Operating Capability: Full Operating Capability (2)	3	2017	3	2017
Deliveries: Full Operating Capability: Full Operating Capability (4)	4	2021	4	2021
Deliveries: Full Operating Capability: Full Operating Capability (5)	4	2023	4	2023

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
3185: *Joint Airlift Information System (JALIS)*	1.698	0.316	0.348	0.353	-	0.353	0.349	0.356	0.364	0.372	Continuing	Continuing
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Joint Air Logistic Information System (JALIS)	0.316	0.348	0.353	0.000	0.353
Articles:	-	-	-	-	-
FY 2018 Plans:					
1. Provide changes and enhancements as directed by the JALIS configuration control board					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
2. Integrate user functions between JALIS and JALIS Dashboard ***FY 2019 Base Plans:*** 1. Create capability to archive historical flight and airlift request records, to include full querying and reporting functions. 2. Create new query and analysis tools to automatically identify solutions for consolidating airlift requests and scheduled flights 3. Begin design and developments of new user interface displays that will consolidate functions currently distributed throughout the system ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** FY19 increase due to increased support required for new user interface displays.					
Accomplishments/Planned Programs Subtotals	0.316	0.348	0.353	0.000	0.353

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

E. Performance Metrics

Performance metrics for JALIS include:

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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)*

(1) Completion of system change request requirements enabling production of articles as itemized in Section B.
(2) Increase operational efficiency
(a) Reduce time to train scheduling personnel by 15%
(b) Reduce time to search for scheduling solutions 10%
(c) Reduce time to train new JALIS users by 20%

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
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 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development, Analysis and QA support	C/CPFF	Navy Air Logistics Office (AHA) : New Orleans, LA	1.698	0.316	Feb 2017	0.348	Feb 2018	0.353	Feb 2019	-		0.353	Continuing	Continuing	Continuing
		Subtotal	1.698	0.316		0.348		0.353		-		0.353	Continuing	Continuing	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 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.698	0.316		0.348		0.353		-		0.353	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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)*

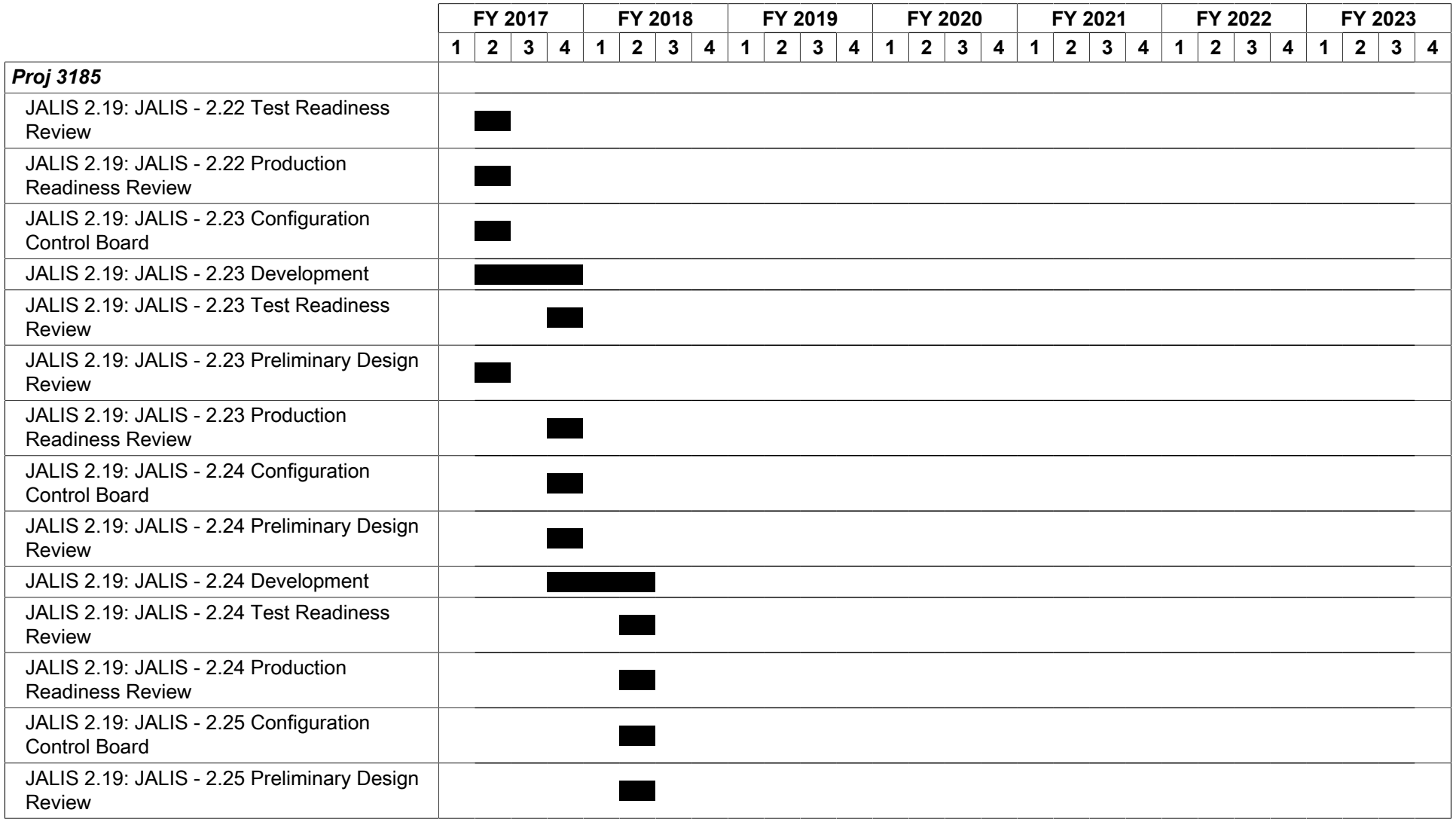


Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3185 / *Joint Airlift Information System (JALIS)*

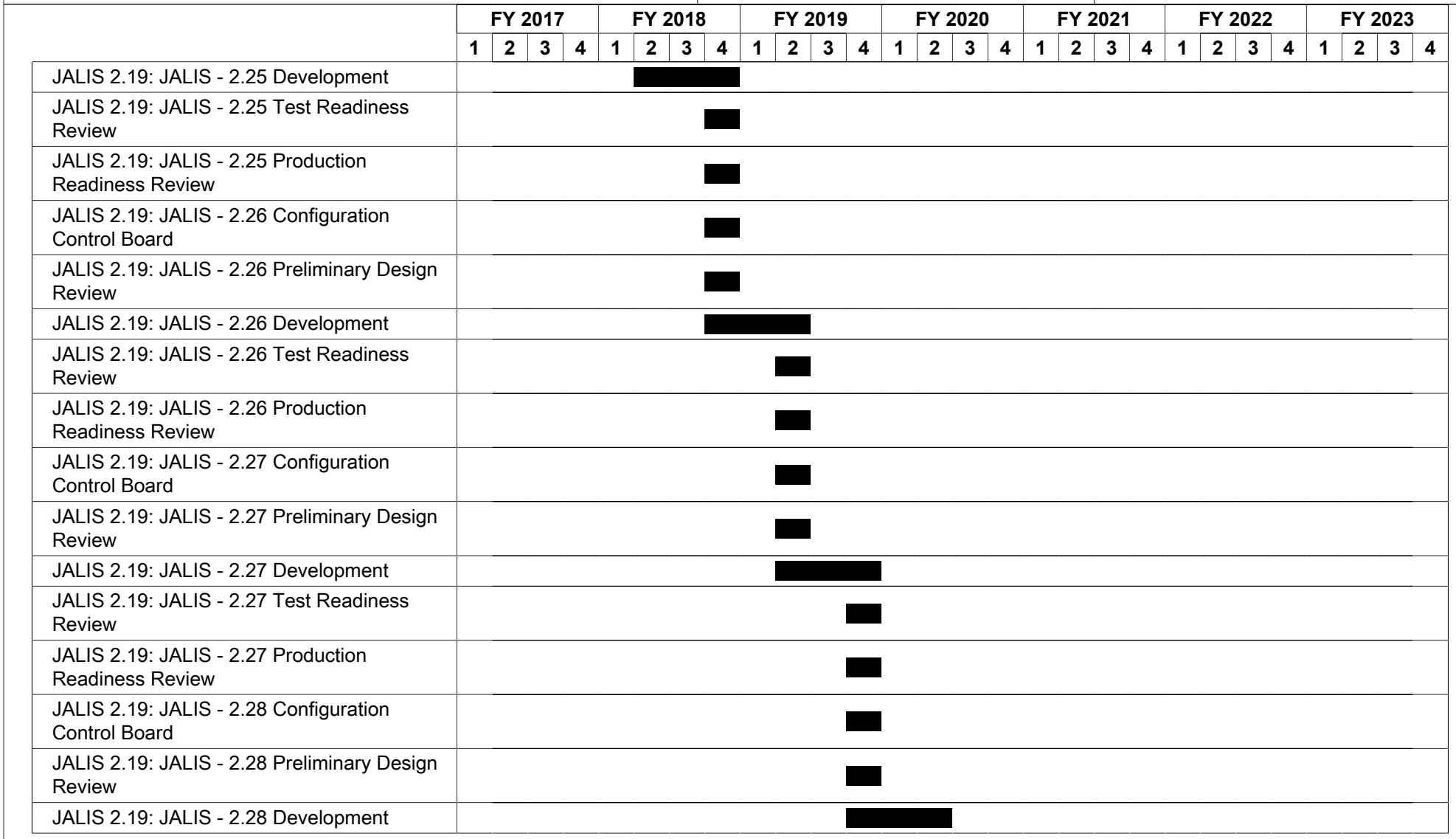


Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3185 / *Joint Airlift Information System (JALIS)*

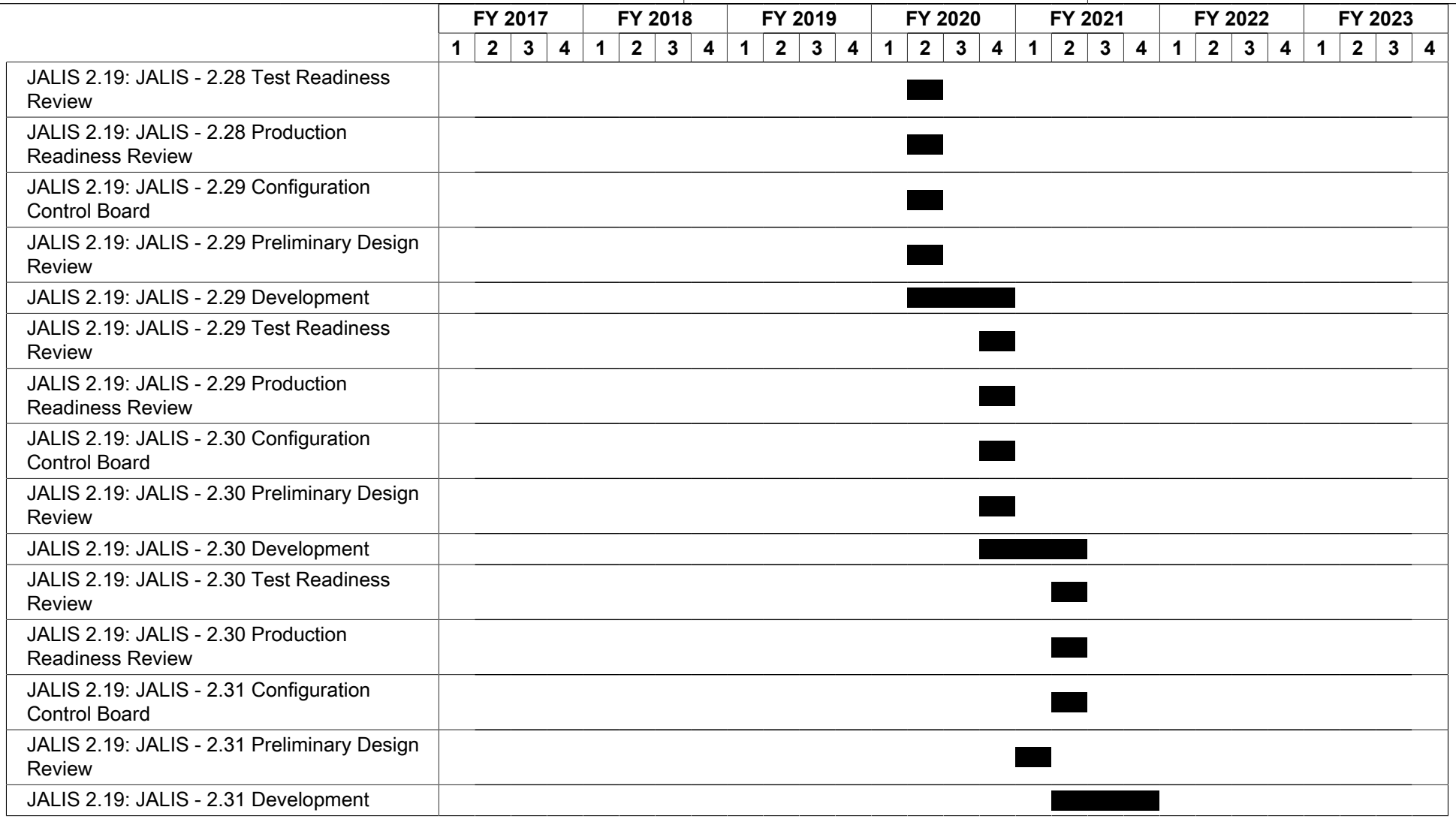


Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3185 / *Joint Airlift Information System (JALIS)*

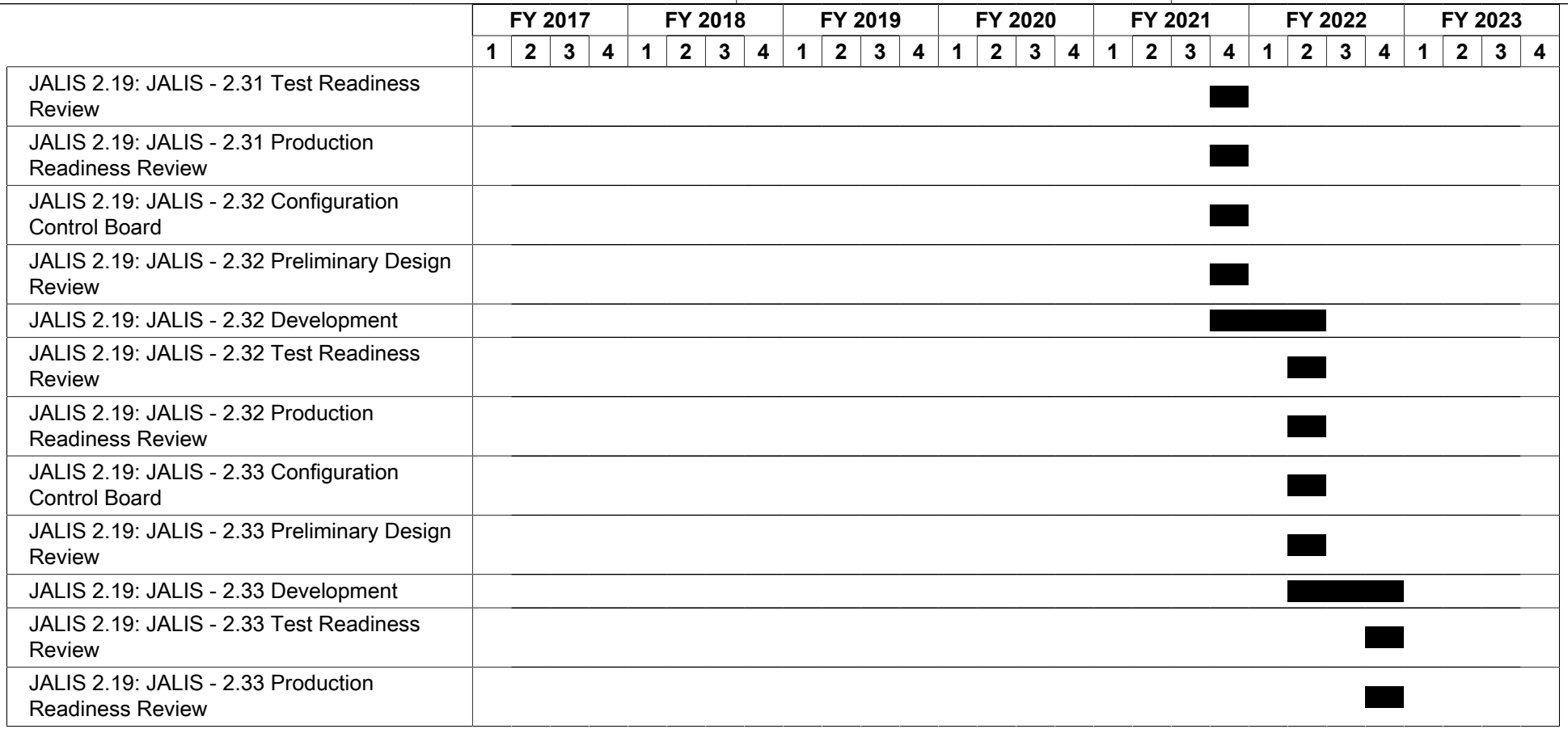


Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3185 / *Joint Airlift Information System (JALIS)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3185				
JALIS 2.19: JALIS - 2.22 Test Readiness Review	2	2017	2	2017
JALIS 2.19: JALIS - 2.22 Production Readiness Review	2	2017	2	2017
JALIS 2.19: JALIS - 2.23 Configuration Control Board	2	2017	2	2017
JALIS 2.19: JALIS - 2.23 Development	2	2017	4	2017
JALIS 2.19: JALIS - 2.23 Test Readiness Review	4	2017	4	2017
JALIS 2.19: JALIS - 2.23 Preliminary Design Review	2	2017	2	2017
JALIS 2.19: JALIS - 2.23 Production Readiness Review	4	2017	4	2017
JALIS 2.19: JALIS - 2.24 Configuration Control Board	4	2017	4	2017
JALIS 2.19: JALIS - 2.24 Preliminary Design Review	4	2017	4	2017
JALIS 2.19: JALIS - 2.24 Development	4	2017	2	2018
JALIS 2.19: JALIS - 2.24 Test Readiness Review	2	2018	2	2018
JALIS 2.19: JALIS - 2.24 Production Readiness Review	2	2018	2	2018
JALIS 2.19: JALIS - 2.25 Configuration Control Board	2	2018	2	2018
JALIS 2.19: JALIS - 2.25 Preliminary Design Review	2	2018	2	2018
JALIS 2.19: JALIS - 2.25 Development	2	2018	4	2018
JALIS 2.19: JALIS - 2.25 Test Readiness Review	4	2018	4	2018
JALIS 2.19: JALIS - 2.25 Production Readiness Review	4	2018	4	2018
JALIS 2.19: JALIS - 2.26 Configuration Control Board	4	2018	4	2018
JALIS 2.19: JALIS - 2.26 Preliminary Design Review	4	2018	4	2018
JALIS 2.19: JALIS - 2.26 Development	4	2018	2	2019
JALIS 2.19: JALIS - 2.26 Test Readiness Review	2	2019	2	2019

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
JALIS 2.19: JALIS - 2.26 Production Readiness Review	2	2019	2	2019
JALIS 2.19: JALIS - 2.27 Configuration Control Board	2	2019	2	2019
JALIS 2.19: JALIS - 2.27 Preliminary Design Review	2	2019	2	2019
JALIS 2.19: JALIS - 2.27 Development	2	2019	4	2019
JALIS 2.19: JALIS - 2.27 Test Readiness Review	4	2019	4	2019
JALIS 2.19: JALIS - 2.27 Production Readiness Review	4	2019	4	2019
JALIS 2.19: JALIS - 2.28 Configuration Control Board	4	2019	4	2019
JALIS 2.19: JALIS - 2.28 Preliminary Design Review	4	2019	4	2019
JALIS 2.19: JALIS - 2.28 Development	4	2019	2	2020
JALIS 2.19: JALIS - 2.28 Test Readiness Review	2	2020	2	2020
JALIS 2.19: JALIS - 2.28 Production Readiness Review	2	2020	2	2020
JALIS 2.19: JALIS - 2.29 Configuration Control Board	2	2020	2	2020
JALIS 2.19: JALIS - 2.29 Preliminary Design Review	2	2020	2	2020
JALIS 2.19: JALIS - 2.29 Development	2	2020	4	2020
JALIS 2.19: JALIS - 2.29 Test Readiness Review	4	2020	4	2020
JALIS 2.19: JALIS - 2.29 Production Readiness Review	4	2020	4	2020
JALIS 2.19: JALIS - 2.30 Configuration Control Board	4	2020	4	2020
JALIS 2.19: JALIS - 2.30 Preliminary Design Review	4	2020	4	2020
JALIS 2.19: JALIS - 2.30 Development	4	2020	2	2021
JALIS 2.19: JALIS - 2.30 Test Readiness Review	2	2021	2	2021
JALIS 2.19: JALIS - 2.30 Production Readiness Review	2	2021	2	2021
JALIS 2.19: JALIS - 2.31 Configuration Control Board	2	2021	2	2021
JALIS 2.19: JALIS - 2.31 Preliminary Design Review	1	2021	1	2021
JALIS 2.19: JALIS - 2.31 Development	2	2021	4	2021
JALIS 2.19: JALIS - 2.31 Test Readiness Review	4	2021	4	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
JALIS 2.19: JALIS - 2.31 Production Readiness Review	4	2021	4	2021
JALIS 2.19: JALIS - 2.32 Configuration Control Board	4	2021	4	2021
JALIS 2.19: JALIS - 2.32 Preliminary Design Review	4	2021	4	2021
JALIS 2.19: JALIS - 2.32 Development	4	2021	2	2022
JALIS 2.19: JALIS - 2.32 Test Readiness Review	2	2022	2	2022
JALIS 2.19: JALIS - 2.32 Production Readiness Review	2	2022	2	2022
JALIS 2.19: JALIS - 2.33 Configuration Control Board	2	2022	2	2022
JALIS 2.19: JALIS - 2.33 Preliminary Design Review	2	2022	2	2022
JALIS 2.19: JALIS - 2.33 Development	2	2022	4	2022
JALIS 2.19: JALIS - 2.33 Test Readiness Review	4	2022	4	2022
JALIS 2.19: JALIS - 2.33 Production Readiness Review	4	2022	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy											Date: February 2018	
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 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
3432: *NMMES-TR*	0.000	0.000	0.000	44.999	-	44.999	81.579	64.681	58.923	40.561	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

The NMMES Technical Refresh (NMMES-TR) program replaces current GOTS software with cloud-based COTS software. NMMES-TR is not a new start; it was formerly a project under Navy Maritime Maintenance Enterprise Solution (NMMES) and reported under Project 2904 of PE 0605013N prior to FY19. The NMMES and NMMES-TR projects complement each other to provide both sustainment of the existing systems and the initial system design, development, and migration to a cloud-based commercial solution. Both programs are essential to build the integrated environment so the existing applications can transition to the follow-on technical refresh replacement solution.

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.

The NMMES-TR initiative has been a pre-acquisition Defense Business System (DBS) effort for the past three years funded Line Item 0605013N, Project Number 2904. In April 2017, the Department approved the NMMES-TR initiative to commence as an acquisition program, resulting in the establishment of a new Project Number 3432 beginning in FY19.

In FY18, the program will be working toward the award of a System Integrator contract. Major milestones in FY18 include Gates 3,4 &5 followed by an Acquisition Authority to Proceed to release the Request for Proposal.

The FY19 increase in funding reflects the scheduled award of the contract to provide a Cloud-based Capability Integration Platform (CIP) environment to integrate core NMMES financial management, human capital management, digital shipbuidling environment, and the cloud-based COTS solution that provides the Maintenance, Repair and Overhaul (MRO) and Portfolio and Project Management (PPM) functionality in support of the Shore Maritime Maintenance community mission. Additionally, the FY19 funding increase supports inherently Governmental efforts (i.e. contracting, acquisition planning & source selection, financial and business management, engineering, testing, logistics, etc.), and Contractor Support Services (i.e. systems engineering, organizational change management, logistics, deployment support, training, etc.). These activities support the award of the System Integrator contract planned for Q2 FY20 following a competitive source selection.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3432 / *NMMES-TR*

The NMMES-TR program office is staffed by government personnel from NAVSEA and SPAWAR SYSCOMS and their supporting Warfare/Systems Centers on a reimbursable basis. Based on a cross-SYSCOM Operating Agreement, the FY19 budget includes funding for inherently governmental efforts in the following functional areas:

a. SPAWAR HQ: Contracting, Legal, Engineering and Cybersecurity
b. SPAWAR Systems Center Atlantic: Engineering and Acquisition
c. NWSC Dahlgren Division: Program Cost Estimating and Analysis
d. Naval Sea Logistics Center (NSLC): Acquisition, Financial and Business Management, Testing and Logistics

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Systems Integration and MRO/PPM Solution	0.000	0.000	44.999	0.000	44.999
Articles:	-	-	-	-	-
FY 2018 Plans: Listed under Project 2904					
FY 2019 Base Plans: Continue the planning and preparation to support a full and open competition with the release of the RFP for a System Integrator contract award. The Systems Integrator will integrate existing legacy systems and application capabilities with COTS cloud-based applications to support Increment 1, the Maintenance, Repair, and Overhaul (MRO) and Portfolio and Project Management (PPM) functionality of the Shore Maritime Maintenance community mission. This effort to integrate legacy capabilities with COTS cloud-based applications includes the establishment and use of a Capability Integration Platform to provide for the transition from the NMMES solution to the NMMES-TR solution.					
FY 2019 OCO Plans: N/A					
FY 2018 to FY 2019 Increase/Decrease Statement: The increase from FY18 to FY19 reflects the increased support required for the establishment of the Capability Integration Platform (CIP), the cloud-based environment to analyze and integrate core NMMES financial management, human capital management, digital shipbuilding environment systems, applications, and data in support of the development of the NMMES-TR solution.					
Accomplishments/Planned Programs Subtotals	0.000	0.000	44.999	0.000	44.999

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3432 / *NMMES-TR*

C. Other Program Funding Summary ($ in Millions)

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.

E. Performance Metrics

SPM 1.0 OPERATIONAL AVAILABILITY:
Operational availability is defined as the percentage of time that NMMES-TR is operationally capable of performing an assigned mission. The operational availability SPM measures the degree to which a system can be supported both in terms of its inherent design characteristics of reliability, availability, maintainability, and operational effectiveness, and the efficacy of the various elements of product support, tools, and training. NMMES-TR will provide a supportable framework with a direct focus on COTS.

SPM 1.1 Reliability - Reliability represents the probability the system will operate without failure over a specified period of time. Reliability accounts for Unscheduled Maintenance.

Mission Critical Functions Threshold
99.5% at LD
99.9% at FD

Mission Critical Functions Objective
97.8% At LD
99.9% at FD

SPM 1.2 Availability - This represents the ability of an end user to access and use the service provided by the system. A Consumer Facing availability requirement is a promise to consumers that they will be able to use the service a certain percentage of time. Availability downtime includes both scheduled and unscheduled maintenance. NMMES-TR must be operationally available to support the maritime maintenance mission.

Mission Critical Functions Threshold
AO > 86.2% at LD

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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AO > 96.6% at FD

Mission Critical Functions Objective
AO > 98.3% at LD
AO > 99.3% at FD

SPM 1.3 Maintainability - The system's ability to be retained in, or restored to, a specified condition when maintenance is performed by personnel with a specified skill, using prescribed procedures and resources, and at each prescribed level of maintenance and repair. Mean time to repair (MTTR) is a basic technical measure of maintainability. The service may be made unavailable for scheduled maintenance, as long as schedule maintenance intervals last no longer than four hours and occur no more frequently than once per month.

Mission Critical Functions Threshold
MTTR < or equal to 6 hrs at LD
MTTR < or equal to 2 hrs at FD

Mission Critical Functions Objective
MTTR < or equal to 4 hrs at LD
MTTR < or equal to 1 hrs at FD

SPM 2.0 SCALABILITY:
Scalability is defined as the capability of a system, network, or process to handle a growing amount of work or its potential to enlarge to accommodate growth. NMMES-TR must be able to support enterprise level usage above 51,000 users worldwide with 25,000 concurrent users. NMMES-TR will also provide scheduling, monitoring, and tracking (SMT) of an upwards of 300,000 individual tasks within a single project for a single site (public NSY or RMC). The dynamic usage solutions will also have the capacity to scale down based on user demand, reducing system resource demand when the high volume is not required. Elastic provisioning and service management targets real end users and mission needs for functionality as the services evolve over time.

SPM 2.1 Dynamic Users - NMMES-TR must be able to support enterprise level usage of at least 51,000 users NMMES-TR must be designed to support user growth.

User Accounts Threshold
> 10,000 at LD
> 51,000 at FD

User Accounts Objective
> 20,000 at LD
> 55,000 at FD

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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SPM 2.2 Concurrent Users - NMMES-TR must support concurrent users without degradation in System Response Time.

Threshold: > 50% of total users
Objective: > 75% of total users

SPM 2.3 Resources/Project SMT Capacity - NMMES-TR must support scheduling and critical chain project management tracking of at least 300,000 individual tasks within a single project for a single site (public NSY or RMC). NMMES-TR must be capable of providing a 50% surge in the level of user accounts.

Project Tasks Threshold
> 75,000 Activity Tasks per Project at LD and > or equal to 100,000 Activity Tasks per Project at FD
> 150,000 Detail Level Tasks per Project at LD and > or equal to 400,000 Detail Level Tasks per Project at FD
> or equal to 75% Surge Capacity in Level of User Growth at LD and FD

Project Tasks Objective
> or equal to 100,000 Activity Tasks per Project at LD and FD
> or equal to 400,000 Detail level Tasks per Project at LD and FD
> or equal to 75% Surge capacity in Level of User Growth at LD and FD

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Cloud Services	TBD	Not Specified : Not Specified	0.000	0.000		0.000		36.149	May 2019	-		36.149	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		36.149		-		36.149	Continuing	Continuing	N/A

Remarks

Growth in FY19 Product development supports activities include the configuration and integration of cloud hosted COTS applications with NMMES legacy systems migration to a cloud hosted environment. Specific tasks include the Capability Integration Platform, the Maintenance Repair and Overhaul (RMO) solution for the Regional Maintenance Centers (RMCs) and Naval Shipyards, Supply Chain Management, Data Analytics and Business Intelligence, Asset Management, ESOH, Laboratory Management, and the Technical Refresh of the MRO Work Brokering and Requirements Management system. Contract Award for the Cloud-based Capability Integration Platform (CIP) is planned for FY19.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO Support	Various	PMS 444 : WNY	0.000	0.000		0.000		8.850	Nov 2018	-		8.850	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		8.850		-		8.850	Continuing	Continuing	N/A

Remarks

Program Management Office contractor and government support

	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.000		44.999		-		44.999	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 3432 / *NMMES-TR*

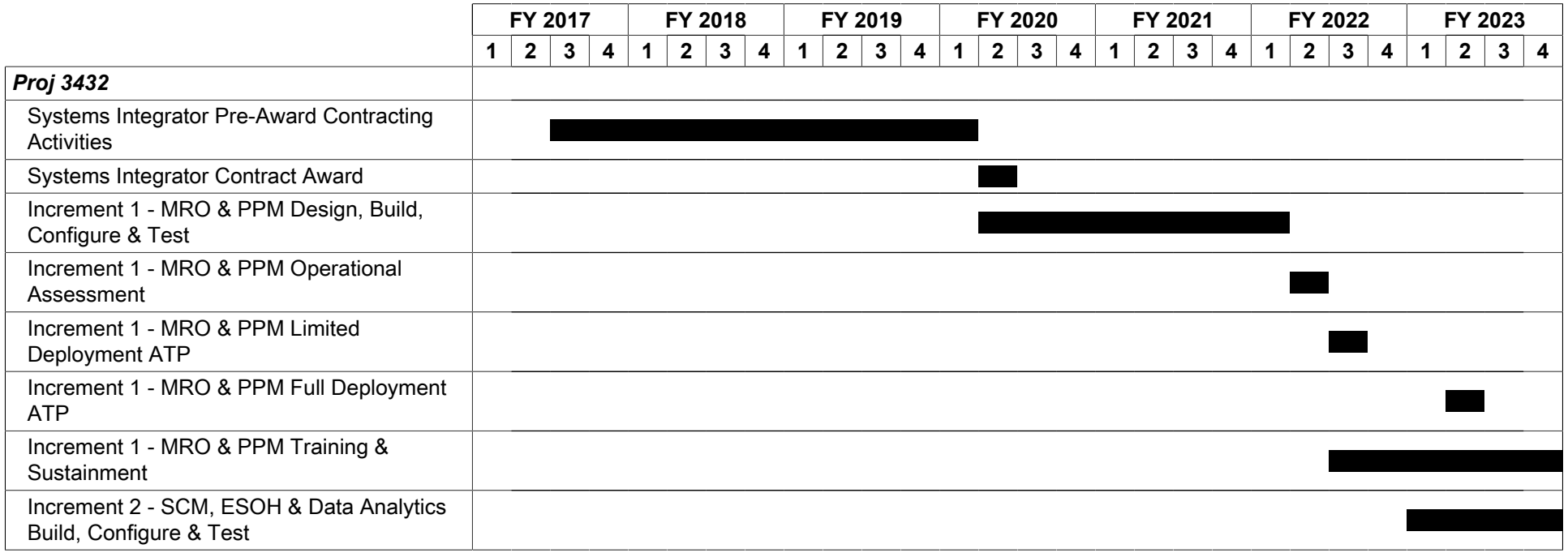

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3432				
Systems Integrator Pre-Award Contracting Activities	3	2017	1	2020
Systems Integrator Contract Award	2	2020	2	2020
Increment 1 - MRO & PPM Design, Build, Configure & Test	2	2020	1	2022
Increment 1 - MRO & PPM Operational Assessment	2	2022	2	2022
Increment 1 - MRO & PPM Limited Deployment ATP	3	2022	3	2022
Increment 1 - MRO & PPM Full Deployment ATP	2	2023	2	2023
Increment 1 - MRO & PPM Training & Sustainment	3	2022	4	2023
Increment 2 - SCM, ESOH & Data Analytics Build, Configure & Test	1	2023	4	2023

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy											Date: February 2018	
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 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
9406: *Maintenance Data Warehouse*	38.190	9.820	4.461	28.362	-	28.362	44.191	54.654	21.051	30.621	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Aviation Data Warehouse/NAVAIR Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE) - The development of the DECKPLATE program is the next generation data warehouse for aircraft maintenance, flight, and usage data. It provides a web-based interface to a single source of information currently being stored in multiple Naval Aviation Logistics Data Analysis systems. Through the use of 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 analysis 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. This requires collecting data from authoritative sources 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 improves data quality because it reduces the possibility of two systems providing identical data elements, but slightly different data. Data availability is improved through continuous near real-time feeds from the data sources, giving the warfighter the most current information to base decisions. In addition, 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 and Engine/Propulsion Systems/Modules (EPSMs).DECKPLATE is comprised of the 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).

Condition Based Maintenance Plus (CBM+) - Funding supports the automated analysis and decision making processes, for the CBM+ 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. The CBM+ Initiative increases readiness by streamlining maintenance processes, provide the sustainment base with timely, actionable logistics data not previously available, and enable engineers and acquisition professionals to support system improvements based on CBM+ acquired data results. CBM+ provides the enabling solutions needed 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.

The Aviation Logistics Environment (ALE) program is the Naval Aviation Information Technology (IT) solution to deliver full lifecycle weapon system logistics and maintenance capabilities to the functional Naval Aviation Support Process (NASP). It will deliver these capabilities via a net centric, shared data environment that supports shore based, afloat, and expeditionary operations. The ALE integrates IT services plane-side and interfaces with infrastructure systems where necessary. ALE is a major logistics enterprise solution and a part of the total enterprise solution architecture. ALE is designed to structure IT services so that they can connect with other parts of the enterprise solution set, thus enabling an interoperable end-to-end business process. ALE consolidates Naval Aviation data into an integrated data environment for high level analysis. The purpose of ALE is to integrate, organize, and develop an underlying infrastructure and analytical capacity across the NASP in order to generate a holistic timely picture of readiness and condition for all T/M/S. ALE will be providing modern Product Lifecycle Management (PLM), Decision

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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Support (Predictive Analytics), Planeside Interfacing, and the Enterprise Infrastructure to support the NAE. The ALE program is a "system of systems" that will provide a common, integrated data environment that will enable NAE Vision 2020 data transparency across the Naval Aviation Enterprise; end-to-end process view to enable both consuming and providing on-demand information to stakeholders; a capability to view "digital twins" of all T/M/S for both allowable and as-configured states; a consolidation of aging, near-end-of-life systems and applications to modern technology and cost efficient support infrastructures; consistent and accurate weapons systems technical and CAD engineering documentation to support additive manufacturing capabilities; standardized metrics, algorithms, and business analysis tools; an architecture that enables migration to the cloud; and alignment to Information Assurance (IA) and Cybersecurity standards, and Risk Management Framework (RMF) compliance.

Vector (formally Integrated Logistics Management System (ILSMS)) supports the development of a common logistics analytical application that uses disciplined approach to Business Intelligence (BI) architecture that combines products, technology and methods aimed at key Naval Aviation Enterprise (NAE) business processes providing a single data source which focuses on aircraft readiness, maintenance, supply, cost, and man-hours. Vector provides naval aviation with a common source for 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, and 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. Aviation Logistics Environment (ALE) reduces ~33 disparate IT systems into a single unified governance ecosystem, and allows for modernization of existing software, hardware, and infrastructure in order to improve cyber readiness and support aircraft and weapons logistics information exchange requirements. Establishment of ALE provides the NAE one common Logistics IT solution for readiness reporting and maintenance at a reduced sustainment cost.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Aviation Data Warehouse/NAVAIR Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE)	2.468	1.487	1.971	0.000	1.971
Articles:	-	-	-	-	-
FY 2018 Plans: Complete the transition of ALS functionality into DECKPLATE so as to establish a central repository for aircraft maintenance and component information into DECKPLATE. Perform modifications to the DECKPLATE system to include Financial Improvement Audit Readiness data elements and Key Supporting Documentation to meet audit standards for Accountable Property System of Record (APSR) systems and meet additional Risk Management Framework (RMF) system controls..					
FY 2019 Base Plans: Develop additional financial management requirements for the DECKPLATE financial feeder systems, Engine Management and Aircraft Inventory Readiness and Reporting System (AIRRS), required as a result of ongoing audit assessments. Data aggregation capabilities and data source integration will be developed between					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
DECKPLATE and Vector to streamline data timeliness for NAE Business Intelligence and Data Analytics. These capabilities will improve the Naval Aviation Enterprise's ability to perform readiness analysis. Development will continue for the DECKPLATE Auto-Log set Phase II capabilities, which has the objective of providing improved algorithms, reduced data duplication, and extension of the life limits for aircraft components. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** DECKPLATE FY19 increase due to development of financial & supply stock data mapping between the Navy Business Information System (NBIS) and DECKPLATE (& DECKPLATE Auto-Log Set (ALS)).					
Title: Aviation Logistics Environment (ALE) ***Articles:*** ***FY 2018 Plans:*** N/A ***FY 2019 Base Plans:*** FY19 efforts will be solidifying requirements, development of documentation to support the Naval Aviation Enterprise (NAE) and Vision 2020, and determining the base capabilities that need to be developed in order to support the Vision 2020 program schedule. The Aviation Logistics Environment (ALE) program will start modernizing existing software that will be maintained as part of the enterprise set of tools. ALE will be supporting the Digital Warfare Office (DWO) readiness initiatives by beginning the development of necessary IT tools, processes, and a common ground station. ALE will begin the development of an integrated data environment, and the determination of a Product Lifecycle Management solution set to support the NAE and additive manufacturing. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase to begin the development of an integrated data environment, and the determination of a Product Lifecycle Management solution set to support the NAE and additive manufacturing.	0.000 -	0.000 -	20.500 -	0.000 -	20.500 -
Title: Condition Based Maintenance Plus (CBM+) ***Articles:***	7.352 -	2.974 -	4.031 -	0.000 -	4.031 -

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
FY 2018 Plans: Continue expansion of CBM+ Standard Data Repository (based on the Hadoop Distributed File System) in production to accommodate and make accessible all BIT/Parametric/Mechanical/Diagnostics data across NAVAIR smart weapon system platforms, and continue evolving other required CBM+ enablers identified by Systems Integration Process physical architecture and design outputs. Continue enhancements to the Enterprise Common CBM+ Environment (Ozone Widget Framework) and the integration of the environment's best-of-breed analytical tools, per the CBM+ Engineering Analysis Tool consolidation and reuse plan, with the large scale Distributed File System storage and analytics infrastructure. Further enable NAVAIR's Core Data Science IPT with massively large scale advanced Statistical Analysis capabilities (COTS and GOTS), while enabling select Organizational Level Maintenance activities with the wireless infrastructure, connectivity, and integrated technologies to improve the on-weapon system maintenance process. Continue the execution of CBM+ pilots and Proof of Concept efforts for identifying affordable/supportable Business Processes, Common IT Solutions, and data/tool integration to streamline the RCM process and expedite decision support using smart aircraft (HUMS) and other data sources within the Enterprise CBM+ Environment.					
FY 2019 Base Plans: Continue expansion of CBM+ Standard Data Repository (based on the Hadoop Distributed File System) in production to accommodate and make accessible all BIT/Parametric/Mechanical/Diagnostics data across all NAVAIR smart weapon system platforms, and continue evolving advanced analytic and Business Intelligence tools within the Enterprise Common CBM+ Environment (Ozone Widget Framework). Integration and enhancement efforts include scaling and widget enablement of Data Miner, Active Reporting Client (ARC), Mechanical Diagnostics Analysis Tool Navy (MDAN), and Regime Recognition analytic tools with the common storage and analytics environment. Integration of the environment's best of breed analytical tools will continue per the annual CBM+ Engineering Analysis Tool consolidation and reuse plan, including the migration of Regime Recognition from Oracle to Hadoop, further enabling the large scale storage and analytics environment. Further enable NAVAIRs Core Data Science IPT with massively large scale advanced Statistical Analysis capabilities (COTS and GOTS), standing up MatLab, Python, R, and Anaconda for integrated advanced analytics sandbox capability for rapid algorithm development, testing and fielding, while enabling select Organizational Level Maintenance activities at New River with a wireless infrastructure foundation tier using standard applications for configuration management and smart aircraft data movement, enabling integrated technologies in support					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
of plane side maintenance and sensor data collection and movement to improve the on-weapon system maintenance process. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** CBM FY19 increase due to extending common and scalable CBM+ storage and analytics infrastructure to support continued H-60R/S and H-53E dynamic component life limit extensions/reassessments, H-1 and other platform predictive maintenance capabilities. Directly supports NAVAIR's digital transformation, affordably enabling foundational enabling components of Sustainment Vision 2020 and Enterprise Digital Business Operations.					
Title: Dynamic Scheduling ***Articles:*** ***FY 2018 Plans:*** N/A ***FY 2019 Base Plans:*** Develop the requirements baseline for Dynamic Scheduling to include, Concept of Operations, Department of Defense Architecture Framework, Business Process Reengineering, Functional Requirement Documents and Systems Engineering Plan. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase due to the addition of Dynamic Scheduling that optimizes aircraft (BuNo specific), engine and component maintenance through task sequencing based on reliability and failure data, and asset utilization vice calendar directed maintenance.	0.000 -	0.000 -	1.200 -	0.000 -	1.200 -
Title: Vector ***Articles:*** ***FY 2018 Plans:*** N/A ***FY 2019 Base Plans:***	0.000 -	0.000 -	0.660 -	0.000 -	0.660 -

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Development of Vector capabilities to satisfy requirements of Naval Aviation Enterprise customers to include: Identification of High Failure Components (Bad Actors); Resource Allocation Management Program (RAMP) system architecture migration; Weapons Munitions Readiness Analysis; Expanding system speed, capacity and Business Intelligence (BI); DEPOT Engine Analysis; Mission System trending analysis; NAVSUP Predictive Supply Digital Interface ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase for Vector capabilities to satisfy requirements of Naval Aviation Enterprise.					
Accomplishments/Planned Programs Subtotals	9.820	4.461	28.362	0.000	28.362

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• OPN/4268/DECKPLATE: *Other Aviation Support Equipment*	1.704	1.870	2.049	-	2.049	2.083	2.117	2.155	2.202	Continuing	Continuing
• OPN/4268/CBM: *Other Aviation Support Equipment*	0.198	0.199	0.216	-	0.216	0.286	0.291	0.298	0.303	Continuing	Continuing

Remarks

D. Acquisition Strategy

Aviation Data Warehouse/NAVAIR Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE) - Development services will be awarded using a competitively awarded contract under the Seaport Contract System containing a matrix of tasks and required levels of performance. Follow on Contract 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 will include a matrix that establishes the minimum acceptable performance standards.

Condition Based Maintenance Plus (CBM+) - Development services will be provided using a 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.

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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-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.

Dynamic Scheduling - Development services will be awarded using a competitively awarded contract under the Seaport Contract System containing a matrix of tasks and required levels of performance. Follow on Contract will utilize the same competitive system. The Services provided under the contract support acquisition

E. Performance Metrics

The following performance metrics apply to Aviation Data Warehouse/NAVAIR Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE), Condition Based Maintenance (CBM+), Vector, Aviation Logistics Environment (ALE) and Dynamic Scheduling:

1. Metric - During the life of the contract verify conformance with agency specific information processing standards and functional requirements. Prior to delivery of enhanced software, demonstrate the operational capability of the system software. Standard - Functionality of the software to meet required systems architecture and processing capabilities. Max Deviation Allowed - All requirements mandated by law or regulation must be 100% compliant. Quality Assurance - Independent Verification and Validation (IV&V) for testing new releases of software to determine that previous functionality is maintained. Customer satisfaction as measured through limited validated customer complaints, feedback, and surveys.
2. Metric - Interfaces must maintain compatibility among system components in the operational environment. Standard - Service Levels for software: Throughput in terms of processing response time, number of transactions processed per second; volume of data processed over time. Compatibility with particular hardware and software within the existing processing environment. Functionality of software to meet required systems architecture and processing capabilities. Max Deviation Allowed - None. Quality Assurance - Customer satisfaction as measured through limited validated customer complaints, feedback and surveys. Operational monitoring by use of system statistics and logs. IV&V for testing new software, including verifying results to determine that requirements and specifications are met.
3. Metric - Documentation for deliverables must match the agency specific system processing and operational procedures. Standard - Documentation meets agency specific formats for accuracy and completeness. Max Deviation Allowed - None. Quality Assurance - IV&V for determining that documentation delivered by the contractor matches the system processing and operational procedures.
4. Metric - Meet delivery dates/milestones. Period of Performance will be 12 months from the date of award. Standard - Delivery dates are met, or exceeded. Max Deviation Allowed - None. Quality Assurance - 100% inspection.
5. Metric - Security. Standard - Meet all Government and agency specific requirements. Max Deviation Allowed - None. Quality Assurance - 100% inspection to ensure that all Government and Agency specific requirements have been met. Independent verification of security procedures defined by agency (could be performed by a third party, or another agency according to current security regulations and measures).
6. Metric - Enhancement to software shall not adversely affect system performance. Standard - Standards affecting system performance include but are not limited to: response time for resolving problems; central processing unit busy; response time; memory utilization; storage utilization. Max Deviation Allowed - Base line functionality is met at 100%. Non critical functionality is met at 95%. Quality Assurance - Operational monitoring by use of system statistics and logs.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

7. Metric - New releases of software must maintain previously provided functionality, while providing enhanced capabilities, or systems corrections. Standard - Software adds value and improves existing functionality without negatively impacting the existing operational environment. Max Deviation Allowed - Base line functionality is met at 100%. Non critical functionality is met at 95%. Quality Assurance - Independent Verification and Validation for testing new releases of software to determine that previous functionality is improved. Customer satisfaction is measured through validated customer complaints and surveys.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 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	Continuing	Continuing	Continuing
Software Development for Aviation Logistics Environment (ALE)	Various	Various : Various	0.000	0.000		0.000		17.800	Dec 2018	-		17.800	Continuing	Continuing	Continuing
Software Development for Decision Knowledge Programming for Logistics Analysis and Technical Evalutaion (DECKPLATE)	C/CPFF	Spalding : Lexington Park, MD	3.847	1.823	Nov 2016	0.588	Nov 2017	0.882	Nov 2018	-		0.882	Continuing	Continuing	Continuing
Softare Development for Condition Based Maintenance PLus 9CBM +)	Various	Various : Various	10.451	6.721	Nov 2016	2.614	Nov 2017	3.511	Nov 2018	-		3.511	Continuing	Continuing	Continuing
Software Development for Vector	MIPR	Wyle : Patuxent River, MD	0.000	0.000		0.000		0.594	Dec 2018	-		0.594	Continuing	Continuing	Continuing
Software development for Dynamic Scheduling	Various	Various : Various	0.000	0.000		0.000		1.000	Jan 2019	-		1.000	Continuing	Continuing	Continuing
		Subtotal	30.553	8.544		3.202		23.787		-		23.787	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support for DECKPLATE	WR	NAWCAD : Patuxent River, MD	5.209	0.917	Oct 2016	0.899	Oct 2017	1.089	Oct 2018	-		1.089	Continuing	Continuing	Continuing
Prior year Prod Def no longer funded in the FYDP	Various	Various : Various	0.628	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Management Support for CBM+	WR	NAWCAD : Patuxent River, MD	1.800	0.359	Oct 2016	0.360	Oct 2017	0.520	Oct 2018	-		0.520	Continuing	Continuing	Continuing
Program Management Support for Aviation	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.000		2.700	Oct 2018	-		2.700	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

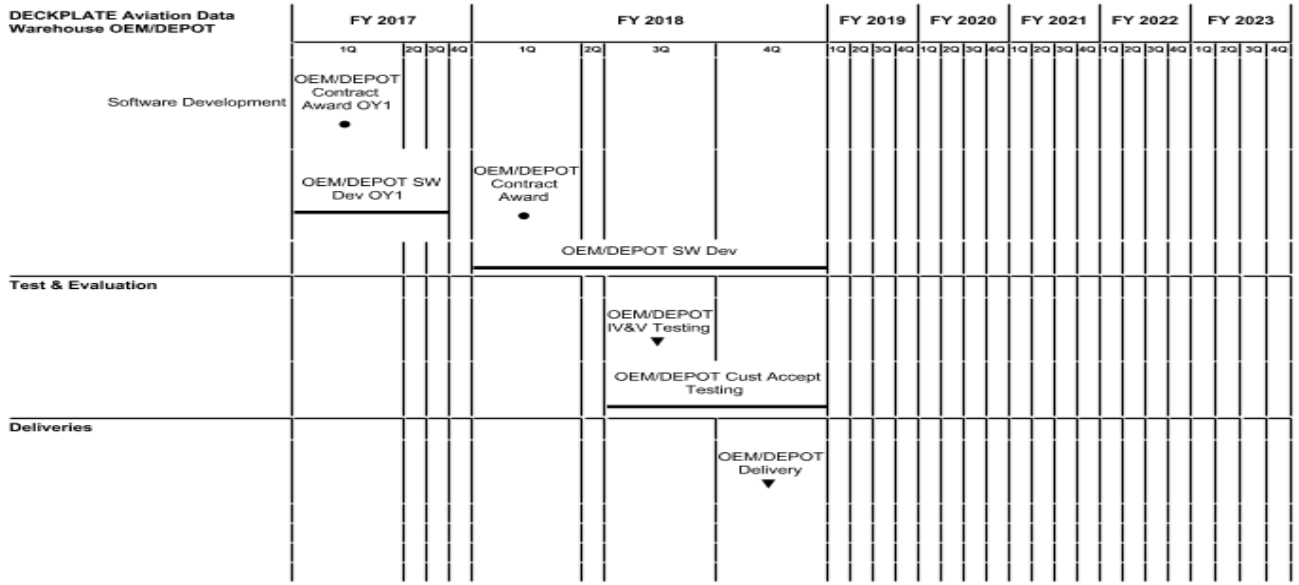
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Logistics Environment (ALE)															
Program Management Support for Vector	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.000		0.066	Oct 2018	-		0.066	Continuing	Continuing	Continuing
Program Management Support for Dynamic Scheduling	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.000		0.200	Oct 2018	-		0.200	Continuing	Continuing	Continuing
		Subtotal	7.637	1.276		1.259		4.575		-		4.575	Continuing	Continuing	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	38.190	9.820		4.461		28.362		-		28.362	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*



2019PB - 0605013N - 9406

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
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 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

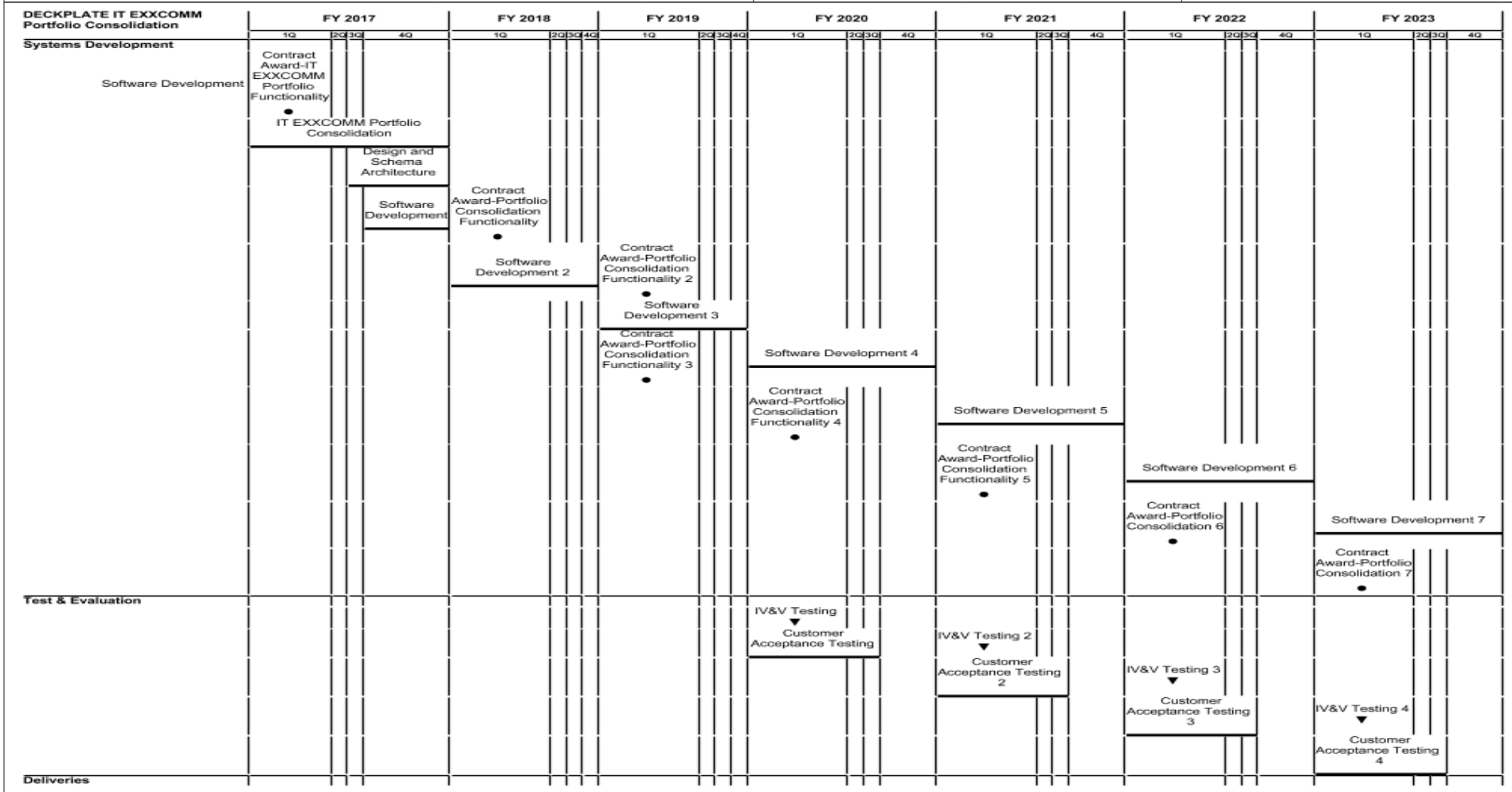


Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

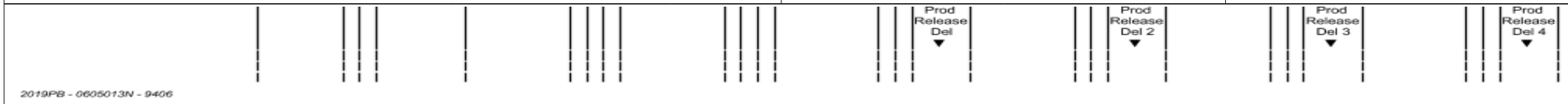


Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

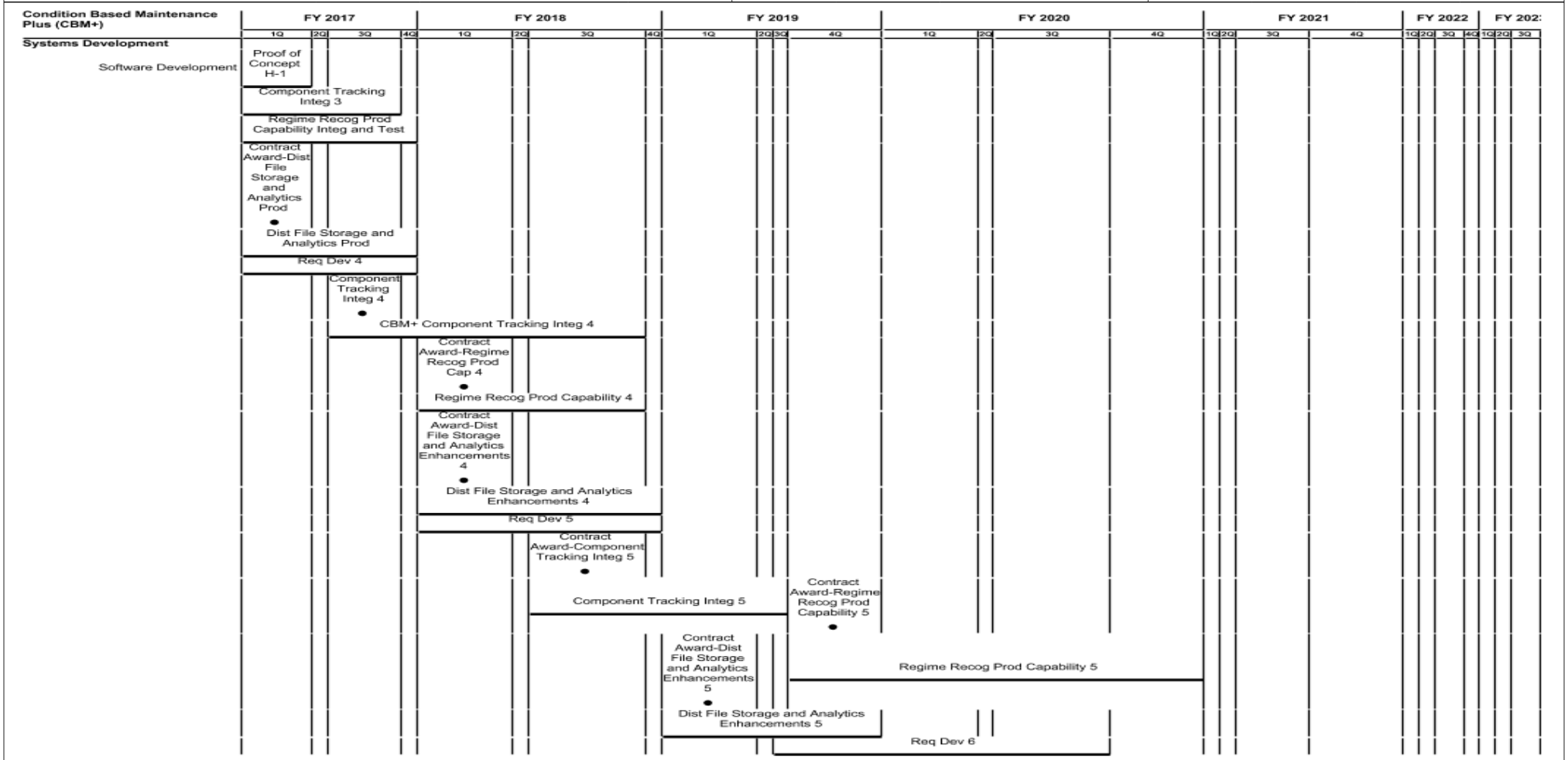


Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

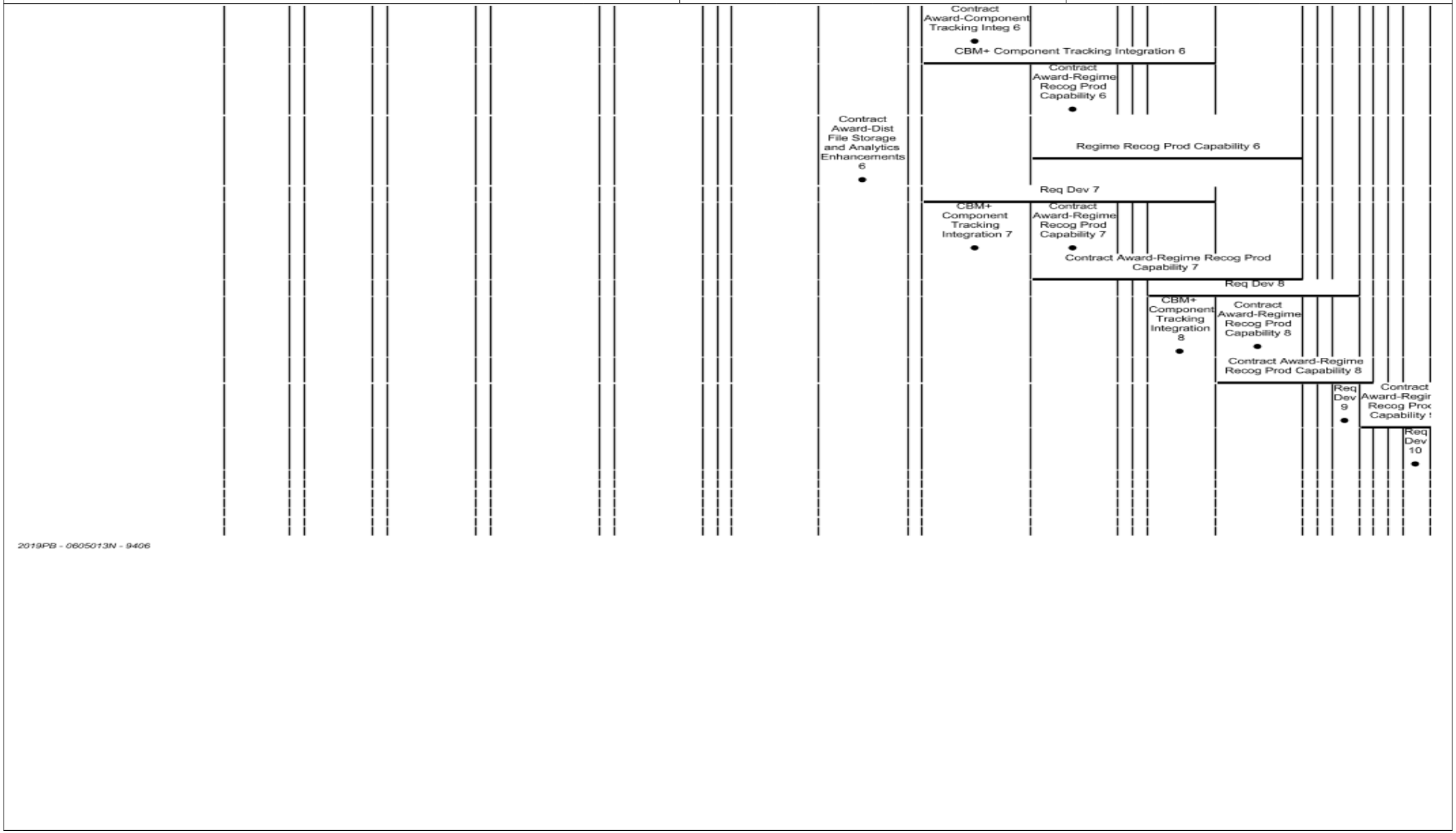
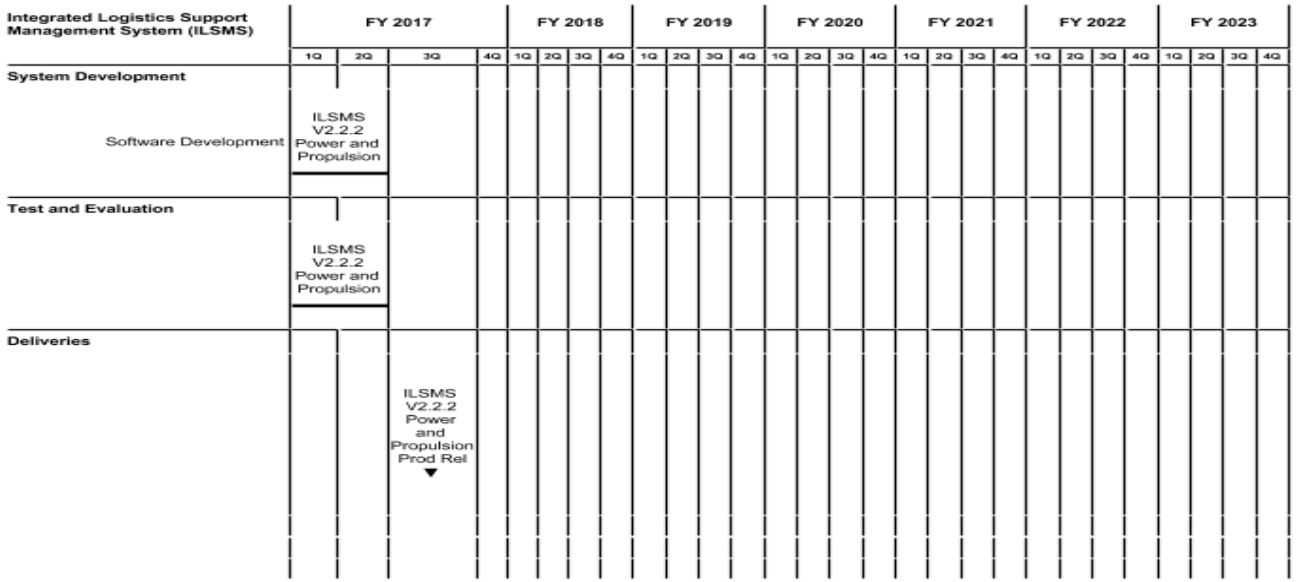


Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*



2019PB - 0605013N - 9406

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

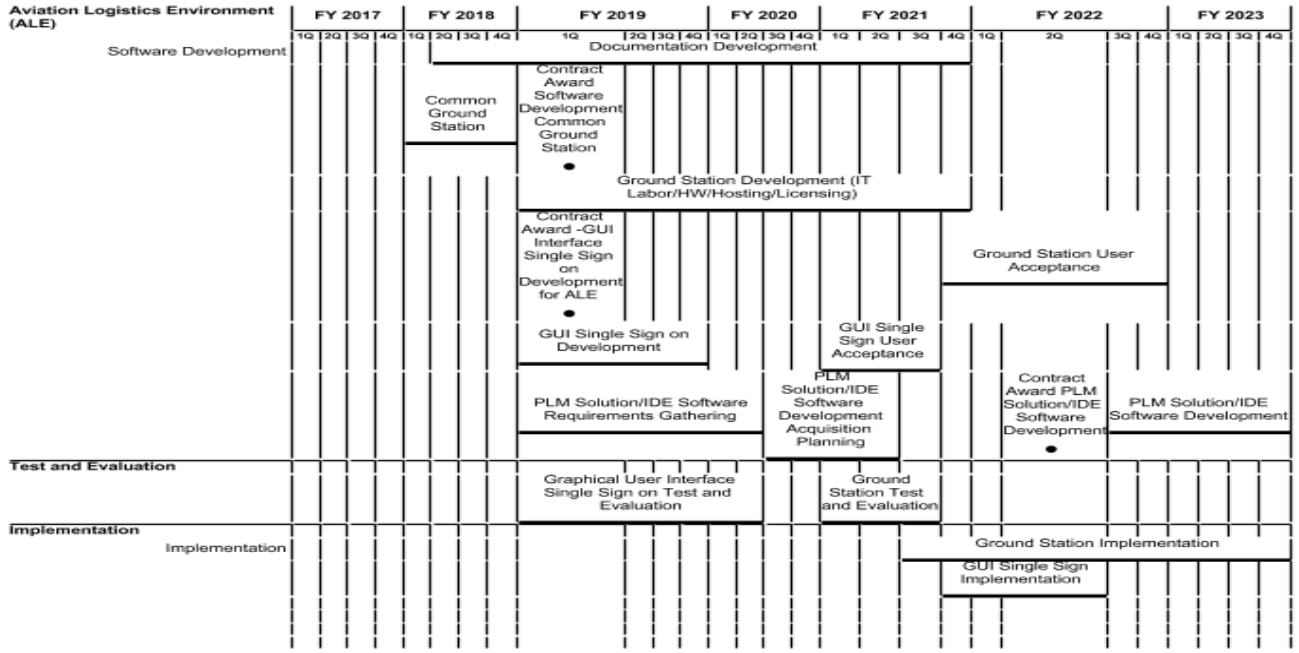
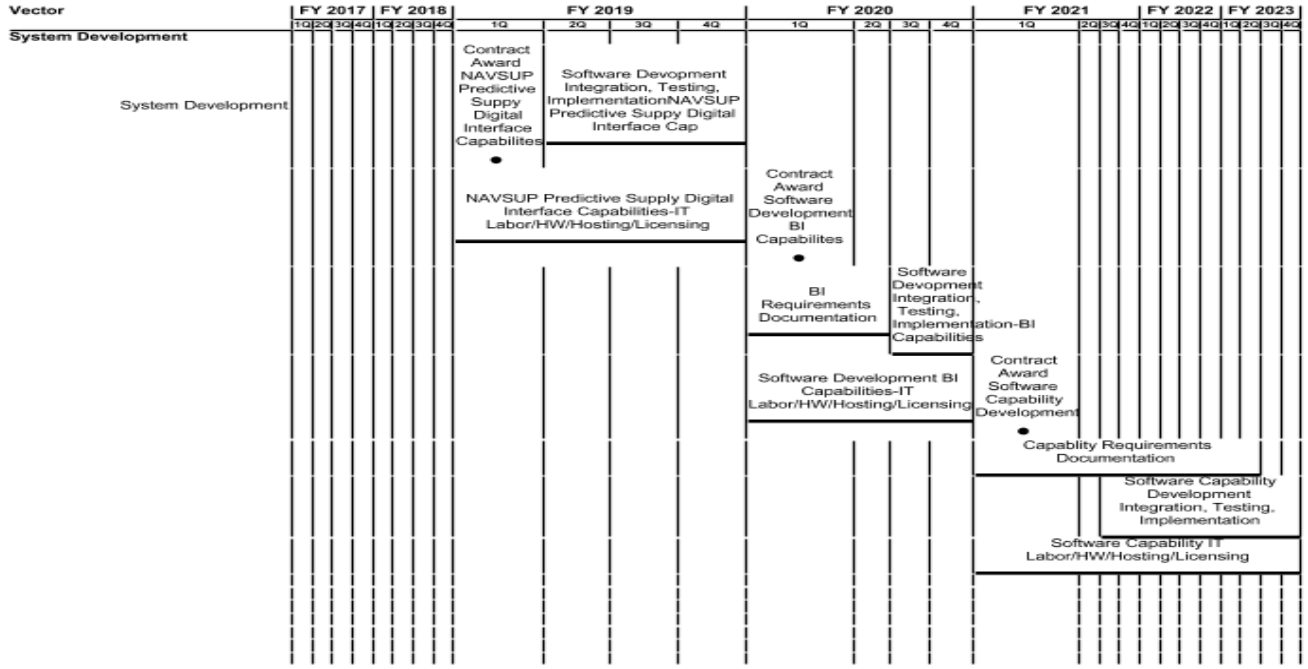
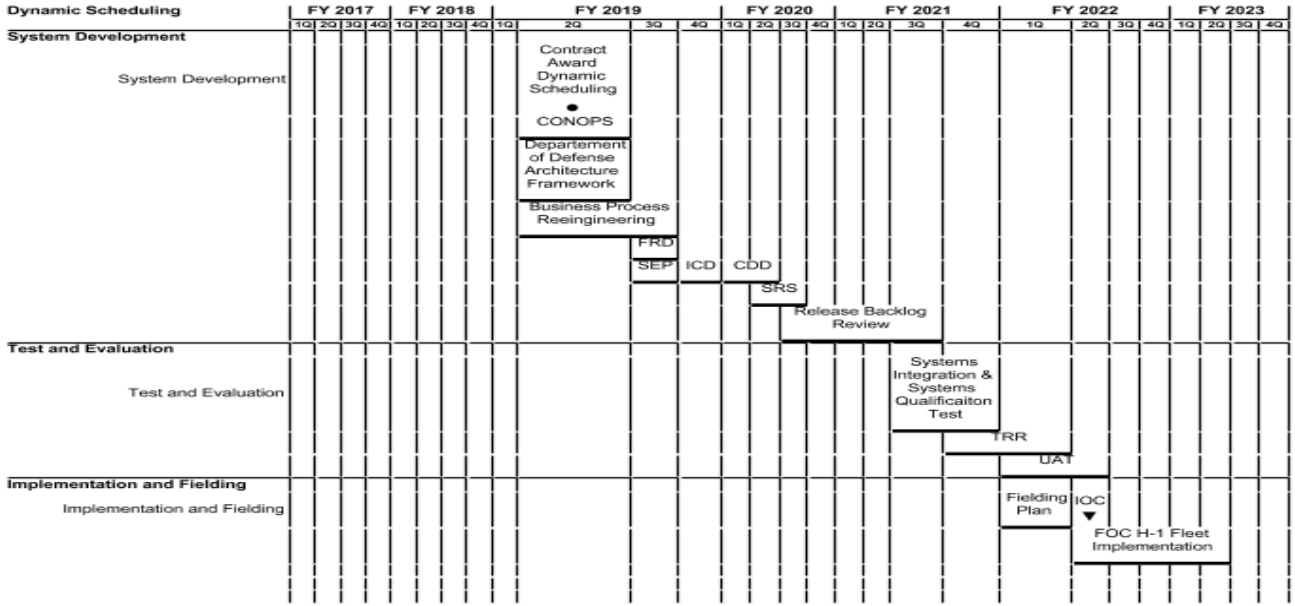


Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*



2019PB - 0605013N - 9406

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*



2019PB - 0605013N - 9406

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605013N / *Information Technology Development*	**Project (Number/Name)** 9406 / *Maintenance Data Warehouse*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
DECKPLATE Aviation Data Warehouse OEM/DEPOT				
Software Development: Contract Award OEM/DEPOT Reporting into DECKPLATE OY1	1	2017	1	2017
Software Development: OEM/DEPOT Software Development OY1	1	2017	3	2017
Software Development: Contract Award OEM/DEPOT Reporting into DEKCPLATE	1	2018	1	2018
Software Development: OEM/DEPOT Software Development	1	2018	4	2018
Test & Evaluation: OEM/DEPOT IV&V Testing	3	2018	3	2018
Test & Evaluation: OEM/DEPOT Customer Acceptance Testing	3	2018	4	2018
Deliveries: OEM/DEPOT Production Release Delivery	4	2018	4	2018
DECKPLATE IT EXXCOMM Portfolio Consolidation				
Systems Development: Software Development: Contract Award-DECKPLATE IT EXXCOMM Portfolio Functionality	1	2017	1	2017
Systems Development: Software Development: DECKPLATE IT EXXCOMM Portfolio Consolidation	1	2017	4	2017
Systems Development: Software Development: DECKPLATE Design and Schema Architecture	3	2017	4	2017
Systems Development: Software Development: DECKPLATE Software Development	4	2017	4	2017
Systems Development: Software Development: Contract Award-DECKPLATE IT EXXCOMM Portfolio Consolidation Functionality	1	2018	1	2018
Systems Development: Software Development: DECKPLATE Software Development 2	1	2018	4	2018
Systems Development: Software Development: Contract Award-DECKPLATE IT EXXCOMM Portfolio Consolidation Functionality 2	1	2019	1	2019
Systems Development: Software Development: DECKPLATE Software Development 3	1	2019	4	2019

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
Systems Development: Software Development: Contract Award-DECKPLATE IT EXXCOMM Portfolio Consolidation Functionality 3	1	2019	1	2019
Systems Development: Software Development: DECKPLATE Software Development 4	1	2020	4	2020
Systems Development: Software Development: Contract Award-DECKPLATE IT EXXCOMM Portfolio Consolidation Functionality 4	1	2020	1	2020
Systems Development: Software Development: DECKPLATE Software Development 5	1	2021	4	2021
Systems Development: Software Development: Contract Award-DECKPLATE IT EXXCOMM Portfolio Consolidation Functionality 5	1	2021	1	2021
Systems Development: Software Development: DECKPLATE Software Development 6	1	2022	4	2022
Systems Development: Software Development: Contract Award-DECKPLATE IT EXXCOMM Portfolio Consolidation Functionality 6	1	2022	1	2022
Systems Development: Software Development: DECKPLATE Software Development 7	1	2023	4	2023
Systems Development: Software Development: Contract Award-DECKPLATE IT EXXCOMM Portfolio Consolidation Functionality 7	1	2023	1	2023
Test & Evaluation: DECKPLATE IV&V Testing	1	2020	1	2020
Test & Evaluation: DECKPLATE Customer Acceptance Testing	1	2020	3	2020
Test & Evaluation: DECKPLATE IV&V Testing 2	1	2021	1	2021
Test & Evaluation: DECKPLATE Customer Acceptance Testing 2	1	2021	3	2021
Test & Evaluation: DECKPLATE IV&V Testing 3	1	2022	1	2022
Test & Evaluation: DECKPLATE Customer Acceptance Testing 3	1	2022	3	2022
Test & Evaluation: DECKPLATE IV&V Testing 4	1	2023	1	2023
Test & Evaluation: DECKPLATE Customer Acceptance Testing 4	1	2023	3	2023
Deliveries: DECKPLATE Production Release Delivery	4	2020	4	2020
Deliveries: DECKPLATE Production Release Delivery 2	4	2021	4	2021
Deliveries: DECKPLATE Production Release Delivery 3	4	2022	4	2022
Deliveries: DECKPLATE Production Release Delivery 4	4	2023	4	2023
Condition Based Maintenance Plus (CBM+)				

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
Systems Development: Software Development: CBM+ Environment Proof of Concept H-1	1	2017	1	2017
Systems Development: Software Development: CBM+ Component Tracking Integration 3	1	2017	3	2017
Systems Development: Software Development: CBM+ Regime Recognition Production Capability Integration and Test	1	2017	4	2017
Systems Development: Software Development: Contract Award-CBM+ Distributed File Storage and Analytics Production	1	2017	1	2017
Systems Development: Software Development: CBM+ Distributed File Storage and Analytics Production	1	2017	4	2017
Systems Development: Software Development: CBM+ Requirements Development 4	1	2017	4	2017
Systems Development: Software Development: Contract Award-CBM+ Component Tracking Integration 4	3	2017	3	2017
Systems Development: Software Development: CBM+ Component Tracking Integration 4	3	2017	3	2018
Systems Development: Software Development: Contract Award-CBM+ Regime Recognition Production Capability 4	1	2018	1	2018
Systems Development: Software Development: CBM+ Regime Recognition Production Capability 4	1	2018	3	2018
Systems Development: Software Development: Contract Award-CBM+ Distributed File Storage and Analytics Enhancements 4	1	2018	1	2018
Systems Development: Software Development: CBM+ Distributed File Storage and Analytics Enhancements 4	1	2018	4	2018
Systems Development: Software Development: CBM+ Requirements Development 5	1	2018	4	2018
Systems Development: Software Development: Contract Award-CBM+ Component Tracking Integration 5	3	2018	3	2018
Systems Development: Software Development: CBM+ Component Tracking Integration 5	3	2018	3	2019

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
Systems Development: Software Development: Contract Award-CBM+ Regime Recognition Production Capability 5	4	2019	4	2019
Systems Development: Software Development: CBM+ Regime Recognition Production Capability 5	4	2019	4	2020
Systems Development: Software Development: Contract Award-CBM+ Distributed File Storage and Analytics Enhancements 5	1	2019	1	2019
Systems Development: Software Development: CBM+ Distributed File Storage and Analytics Enhancements 5	1	2019	4	2019
Systems Development: Software Development: CBM+ Requirements Development 6	3	2019	3	2020
Systems Development: Software Development: Contract Award-CBM+ Component Tracking Integration 6	3	2020	3	2020
Systems Development: Software Development: CBM+ Component Tracking Integration 6	3	2020	3	2021
Systems Development: Software Development: Contract Award-CBM+ Regime Recognition Production Capability 6	4	2020	4	2020
Systems Development: Software Development: CBM+ Regime Recognition Production Capability 6	4	2020	4	2021
Systems Development: Software Development: Contract Award-CBM+ Distributed File Storage and Analytics Enhancements 6	1	2020	1	2020
Systems Development: Software Development: CBM+ Requirements Development 7	3	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

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
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
Systems Development: Software Development: CBM+ Requirements Development 9	3	2022	3	2022
Systems Development: Software Development: Contract Award-CBM+ Regime Recognition Production Capability 9	4	2022	4	2023
Systems Development: Software Development: CBM+ Requirements Development 10	3	2023	3	2023
Integrated Logistics Support Management System (ILSMS)				
System Development: Software Development: V2.2.2 ILSMS Power and Propulsion Software Development	1	2017	2	2017
Test and Evaluation: ILSMS V2.2.2 Power and Propulsion Test and Evaluation	1	2017	2	2017
Deliveries: ILSMS V2.2.2 Power and Propulsion Production Release	3	2017	3	2017
Aviation Logistics Environment (ALE)				
Software Development: Software Documentation Development	2	2018	4	2021
Software Development: Software Requirements Gathering -Common Ground Station	1	2018	4	2018
Software Development: Contract Award Software Development Common Ground Station	1	2019	1	2019
Software Development: Ground Station Development (IT Labor/HW/Hosting/Licensing)	1	2019	4	2021
Software Development: Ground Station User Acceptance	4	2021	4	2022
Software Development: Contract Award -Graphical User Interface Single Sign on Development for ALE	1	2019	1	2019
Software Development: Graphical User Interface Interface Single Sign on Development	1	2019	4	2019

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
Software Development: Graphical User Interface Interface Single Sign User Acceptance	1	2021	3	2021
Software Development: PLM Solution/IDE Software Requirements Gathering	1	2019	2	2020
Software Development: PLM Solution/IDE Software Development Acquisition Planning	3	2020	2	2021
Software Development: Contract Award PLM Solution/IDE Software Development	2	2022	2	2022
Software Development: PLM Solution/IDE Software Development	3	2022	4	2023
Test and Evaluation: Graphical User Interface Single Sign on Test and Evaluation	1	2019	2	2020
Test and Evaluation: Ground Station Test and Evaluation	1	2021	3	2021
Implementation: Implementation: Ground Station Implementation	3	2021	4	2023
Implementation: Implementation: Graphical User Interface Single Sign Implementation	4	2021	2	2022
Vector				
System Development: System Development: Software Development Contract Award-NAVSUP Predictive Suppy Digital Interface Capabilites	1	2019	1	2019
System Development: System Development: Software Development Integration, Testing, Implementation-NAVSUP Predictive Suppy Digital Interface Capabilites	2	2019	4	2019
System Development: System Development: Software DevelopmentNAVSUP Predictive Supply Digital Interface Capabilities-IT Labor/HW/Hosting/Licensing	1	2019	4	2019
System Development: System Development: Contract Award Software Development BI Capabilites	1	2020	1	2020
System Development: System Development: Requirements Documentation Capability Development of Business Intelligence (BI) Capabilities	1	2020	2	2020
System Development: System Development: Software Development Integration, Testing, Implementation-BI Capabilities	3	2020	4	2020
System Development: System Development: Software Development BI Capabilities-IT Labor/HW/Hosting/Licensing	1	2020	4	2020
System Development: System Development: Contract Award Software Capability Development	1	2021	1	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
System Development: System Development: Software Capablity Requirements Documentation	1	2021	2	2023
System Development: System Development: Software Capability Development Integration, Testing, Implementation	3	2021	4	2023
System Development: System Development: Software Capability IT Labor/HW/ Hosting/Licensing	1	2021	4	2023
Dynamic Scheduling				
System Development: System Development: Contract Award Dynamic Scheduling	2	2019	2	2019
System Development: System Development: Concept of Operations (CONOPS)	2	2019	2	2019
System Development: System Development: Department of Defense Architecture Framework	2	2019	2	2019
System Development: System Development: Business Process Reeingineering	2	2019	3	2019
System Development: System Development: Functional Reqwuirements Document (FRD)	3	2019	3	2019
System Development: System Development: Systems Engineering Plan (SEP)	3	2019	3	2019
System Development: System Development: Interface Control Dcoument (ICD)	4	2019	4	2019
System Development: System Development: Change Description Document (CDD)	1	2020	2	2020
System Development: System Development: System Requirements Specificaiton (SRS)	2	2020	3	2020
System Development: System Development: Release Backlog Review	3	2020	3	2021
Test and Evaluation: Test and Evaluation: Development Testing	3	2021	4	2021
Test and Evaluation: Test and Evaluation: Test Readiness Review (TRR)	4	2021	1	2022
Test and Evaluation: Test and Evaluation: User Acceptance Testing (UAT)	1	2022	2	2022
Implementation and Fielding: Implementation and Fielding: Fielding Plan	1	2022	1	2022
Implementation and Fielding: Implementation and Fielding: Initial Operational Capability (IOC) Single Squadron	2	2022	2	2022

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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**
Implementation and Fielding: Implementation and Fielding: Full Operation Capability (FOC) (H-1 Fleet Implementation)	2	2022	2	2023