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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy</i> / BA 6: <i>RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0605152N / <i>Studies & Analysis Supt - Navy</i>							
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	0.000	3.870	3.908	3.089	-	3.089	3.158	3.381	3.342	3.409	Continuing	Continuing
2092: <i>Naval Warfare Studies</i>	0.000	0.766	0.785	0.025	-	0.025	0.000	0.000	0.000	0.000	0.000	1.576
2097: <i>Manpower Personnel & Training</i>	0.000	0.528	0.531	0.501	-	0.501	0.512	0.522	0.533	0.544	Continuing	Continuing
3310: <i>Naval Aviation Developmental Planning</i>	0.000	2.576	2.592	2.563	-	2.563	2.646	2.859	2.809	2.865	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program provides analytical support to the Secretary of the Navy and the Chief of Naval Operations as a basis for major policy, planning and acquisition program execution decisions. It supports research and development strategy development and planning. It supports studies in the areas of manpower, personnel, training, and aviation. It also develops analytical tools for evaluating effectiveness of U.S. weapons against potential foreign threat ships and submarines.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.

B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	3.942	3.908	3.922	-	3.922
Current President's Budget	3.870	3.908	3.089	-	3.089
Total Adjustments	-0.072	0.000	-0.833	-	-0.833
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.072	0.000			
• Program Adjustments	0.000	0.000	-0.844	-	-0.844
• Rate/Misc Adjustments	0.000	0.000	0.011	-	0.011

Change Summary Explanation

Technical: Not applicable.
Schedule: Not applicable.

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Funding: FY2020 to FY2021 funding reduction to Project 2092 was due to reduction of RAM user efforts.		

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605152N / <i>Studies & Analysis Supt - Navy</i>					Project (Number/Name) 2092 / <i>Naval Warfare Studies</i>		
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
2092: <i>Naval Warfare Studies</i>	0.000	0.766	0.785	0.025	-	0.025	0.000	0.000	0.000	0.000	0.000	1.576
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports detailed mission, capability, and technical analysis of future naval warfighting requirements. This work provides the analytical basis for integration and prioritization of overall military capability requirements and acquisition programs in support of executing the Naval Capability Development Process and development/delivery of Mission Capability Packages, Naval Capability Packages, and Integrated Strategic Capability Plans for Chief of Naval Operations. The Resource Allocation Model (RAM) is an analytic decision support tool to aid Navy leadership with both investment and divestment programming decisions. This methodology provides an assessment process that fosters informed, understandable, repeatable investment decisions with consistent, pedigreed, and retrievable information. The focus of this work adds fidelity to the system through the inclusion of Mission Technical Baselines and Integrated Capabilities Technical Baselines data to identify program of record integration and interoperability dependencies to inform investment/divestment decisions. It provides leadership and resource sponsors with a starting point for their offset decision process as well as an issue ranking capability. RAM will include linkage of programs to strategic imperatives, programs mapped to warfare areas, program interdependencies annotated, and balance factors that can be adjusted to reflect Navy Leadership Priorities. This effort captures and maps issues/funding adjustments, and providing a system capable of identifying fiscal interdependencies and consideration to risk in order to increase accuracy in calculating programmatic risk.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Resource Allocation Model (RAM)	0.766	0.785	0.025	0.000	0.025
Articles:	-	-	-	-	-
FY 2020 Plans: Continue establishing the Resource Allocation Model to provide an analytic portfolio management methodology to aid Navy leadership with investment decision support. Provide an assessment process that fosters informed, understandable, repeatable investment decisions with consistent, pedigreed, and retrievable information. Assess programs of record and their proposed modifications on their capability to contribute to future warfighting requirements.					
FY 2021 Base Plans: Continue updating the Resource Allocation Model to provide an analytic portfolio management methodology to aid Navy leadership with investment decision support. Provide an assessment process that fosters informed, understandable, repeatable investment decisions with consistent, pedigreed, and retrievable information.					

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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605152N / <i>Studies & Analysis Supt - Navy</i>	Project (Number/Name) 2092 / <i>Naval Warfare Studies</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Assess programs of record and their proposed modifications on their capability to contribute to future warfighting requirements. FY 2021 OCO Plans: N/A FY 2020 to FY 2021 Increase/Decrease Statement: Reduction of -0.785 from FY 2020 to FY 2021 is due to reduction of RAM user efforts.					
Accomplishments/Planned Programs Subtotals	0.766	0.785	0.025	0.000	0.025

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

Remarks

D. Acquisition Strategy
Not applicable.

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Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605152N / <i>Studies & Analysis Supt - Navy</i>				Project (Number/Name) 2097 / <i>Manpower Personnel & Training</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
2097: <i>Manpower Personnel & Training</i>	0.000	0.528	0.531	0.501	-	0.501	0.512	0.522	0.533	0.544	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Chief of Naval Personnel has a continuing need for studies and analysis of Manpower and Personnel (M&P) policies and programs and critical M&P issues that have Navy-wide implications. This project provides an essential management tool to: (a) assess the effectiveness of existing M&P policies and programs; (b) identify needs for new policies and programs; (c) determine the required manpower and training mix relative to changing demographic, societal and legislative/regulatory actions, and to evolving strategic and geopolitical factors; (d) study the impact of M&P programs on Navy accession, attrition, retention, and performance; and, (e) to develop, validate and/or refine a broad range of M&P forecasting models. The program permits Navy to more effectively utilize Research and Development expertise to respond to emergent M&P issues on a continuing basis. This program is funded under RDT&E operational systems development because it encompasses engineering and development of new end-items prior to production approval decision.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Manpower Personnel & Training	0.528	0.531	0.501	0.000	0.501
Articles:	4	5	5	-	5
Description: The Chief of Naval Personnel has a continuing need for studies and analysis of Manpower and Personnel (M&P) policies and programs and critical M&P issues that have Navy-wide implications. This project provides an essential management tool to: (a) assess the effectiveness of existing M&P policies and programs; (b) identify needs for new policies and programs; (c) determine the required manpower and training mix relative to changing demographic, societal and legislative/regulatory actions, and to evolving strategic and geopolitical factors; (d) study the impact of M&P programs on Navy accession, attrition, retention, and performance; and, (e) to develop, validate and/or refine a broad range of M&P forecasting models. The program permits Navy to more effectively utilize Research and Development expertise to respond to emergent M&P issues on a continuing basis. This program is funded under RDT&E operational systems development because it encompasses engineering and development of new end-items prior to production approval decision. Analytical support to the Secretary of the Navy and the Chief of Naval Personnel as a basis for major policy, planning, and acquisition program execution decisions. It supports the maturation and implementation of strategy and planning via studies in the areas of manpower, personnel, training, and education.					
FY 2020 Plans:					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<ul style="list-style-type: none"> - Continue assessing Special and Incentive Pay policies. - Continue assessing Econometric Modeling System and updating elasticity - Continue assessing and evaluating retention, accession and training trade-offs. - Continue assessing economic factors and relationships to MPTE business lines ISO forecasting and responses. - Continue assessing factors, thresholds and mitigation strategies in support of emerging business metrics (Priority) <p>FY 2021 Base Plans: Continue assessing Special and Incentive Pay policies.</p> <ul style="list-style-type: none"> - Continue assessing Econometric Modeling System and updating elasticity - Continue assessing and evaluating retention, accession and training trade-offs. - Continue assessing economic factors and relationships to MPTE business lines ISO forecasting and responses. - Continue assessing factors, thresholds and mitigation strategies in support of emerging business metrics (Priority) <p>FY 2021 OCO Plans: N/A</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Program decrease due to Process Improvement to Increase Efficiency in Military Spending and Economic Assumptions such as Purchase Inflation Rate Changes.</p>					
Accomplishments/Planned Programs Subtotals	0.528	0.531	0.501	0.000	0.501

C. Other Program Funding Summary (\$ in Millions) N/A
Remarks
D. Acquisition Strategy N/A

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Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605152N / <i>Studies & Analysis Supt - Navy</i>					Project (Number/Name) 3310 / <i>Naval Aviation Developmental Planning</i>		
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
3310: <i>Naval Aviation Developmental Planning</i>	0.000	2.576	2.592	2.563	-	2.563	2.646	2.859	2.809	2.865	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Funding supports Naval aviation pre-Milestone B developmental activities to include the conduct and integration of systems engineering activities. This project unit provides information, automated tools, and decision aids necessary to perform acquisition planning in support of warfighter capability requirements. This project unit also supports research, development, and analysis efforts to include various studies, joint requirements analysis, and cost analysis in support of systems engineering activities, analyses of alternatives, and development of Capability Evolution Plan. Due to high turnover and end of service life of several Naval aircraft set against increasing threat capabilities, DOD 5000 series mandates documentation of capability requirements and mechanisms to obtain these capabilities. This project unit allows Naval aviation the means to properly identify capability gaps and potential solutions required to maintain maximum warfighting capability realizing (or achieving) reductions to technical risks and overall program costs.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Naval Aviation Developmental Planning	2.576	2.592	2.563	0.000	2.563
Articles:	-	-	-	-	-
FY 2020 Plans: Continue various studies for training aircraft, FA-18E/F/G, P-8A, MH-60R, MH-60S, and Joint Strike Fighter with integrated engineering, logistics, and manpower requirements. Meet emergent engineering requirements documentation within the air warfare portfolio. Update decision support toolset to facilitate internal air warfare and program office total life-cycle trades, and reduce long-term costs of data repositories, manpower, and computer programs. Fund total life-cycle analysis modeling environment required for multiple anticipated analyses of alternatives on fighter, adversary, and rotary-wing aircraft to reduce total cost of studies. Analyses are required to meet pre-Milestone B, DOD 5000 series mandated activities, as well as timelines mandated by the Congressional requirements for an Aviation Investment Plan.					
FY 2021 Base Plans: Continue studies for various aircraft with integrated engineering, logistics, and manpower requirements. Meet emergent engineering requirements documentation within the air warfare portfolio. Update decision support toolset to facilitate internal air warfare and program office total life-cycle trades, and reduce long-term costs of data repositories, manpower, and computer programs. Fund total life-cycle analysis modeling environment required for multiple anticipated analyses of alternatives on fighter, adversary, and rotary-wing aircraft to reduce					

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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605152N / <i>Studies & Analysis Supt - Navy</i>	Project (Number/Name) 3310 / <i>Naval Aviation Developmental Planning</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
total cost of studies. Analyses are required to meet pre-Milestone B, DOD 5000 series mandated activities, as well as timelines mandated by the Congressional requirements for an Aviation Investment Plan.					
<i>FY 2021 OCO Plans:</i> N/A					
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> There is no significant change from FY 2020 and FY 2021.					
Accomplishments/Planned Programs Subtotals	2.576	2.592	2.563	0.000	2.563

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

N/A

Remarks

D. Acquisition Strategy

N/A