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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0605504N I (U)Multi-Mission Maritime (MMA) Increment III							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	89.686	182.220	181.731	-	181.731	193.405	149.398	152.527	130.668	Continuing	Continuing
3218: P-8A Spiral 2 Development	0.000	89.686	182.220	181.731	-	181.731	193.405	149.398	152.527	130.668	Continuing	Continuing
Program MDAP/MAIS Code: Project MDAP/MAIS Code(s): 334												
A. Mission Description and Budget Item Justification The P-8A Increment 3 program consists of incremental enhancement Engineering Change Proposals (ECPs) to system capabilities that will retain cost-wise effectiveness for major combat operations. Increment 3 will incorporate improvements to aircraft systems including Combat System hardware and architecture improvements, Anti-Submarine Warfare (ASW) and Anti-Surface Warfare (ASuW) sensor improvements, communication capability upgrades, ASuW Net Enabled Weapon (NEW), Higher-Than-Secret (HTS) security capability and High Altitude ASW Weapons Capability (HAAWC) datalink. These capabilities will be developed as a series of ECPs for the P-8A and are as follows: - ECP 4 - Software upgrades to Narrowband SATCOM and Targeting. - ECP 5 - Net Enabled Weapon, High Frequency radio Internet Protocol (HF-IP), Integrated Broadcast Service (IBS) filtering, IBS receiver, and Harpoon II+. - ECP 6 - Applications Based Architecture (ABA) and Combat System, Anti-Submarine Warfare (ASW) capability, Wide Band SATCOM, Higher Than Secret (HTS) processing, ASW SIGINT, and Enhanced track management (Minotaur). - ECP 7 - Enhanced Multi-Static Active Coherent (MAC). To expedite fielding capability to the P-8A Fleet, ECPs 4, 5, and 6 are executed concurrently as these capabilities are independent of one another. However, Enhanced MAC (ECP 7) is reliant on ECP 6's Combat System hardware and architecture to operate on the P-8A. Note: Enhanced MAC (ECP 7) is developed within Program Element 0604261N and integrated into the platform within this PE.												

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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	91.616	182.220	183.969	-	183.969
Current President's Budget	89.686	182.220	181.731	-	181.731
Total Adjustments	-1.930	0.000	-2.238	-	-2.238
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.930	0.000			
• Program Adjustments	0.000	0.000	-0.273	-	-0.273
• Rate/Misc Adjustments	0.000	0.000	-1.965	-	-1.965
Change Summary Explanation					
Technical: Not applicable.					
Schedule: Adjustments made to programmatic milestones and contract awards to better reflect the current updated Increment 3 Acquisition Strategy (signed Mar 9, 2016) defining the program as a series of ECPs.					
Funding transferred from PE 0605500N to new PE 0605504N.					

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Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605504N I (U)Multi-Mission Maritime (MMA) Increment III				Project (Number/Name) 3218 I P-8A Spiral 2 Development			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
3218: P-8A Spiral 2 Development	0.000	89.686	182.220	181.731	-	181.731	193.405	149.398	152.527	130.668	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 334												
A. Mission Description and Budget Item Justification												
The P-8A Increment 3 program consists of incremental enhancement Engineering Change Proposals (ECPs) to system capabilities that will retain cost-wise effectiveness for major combat operations. Increment 3 will incorporate improvements to aircraft systems including Combat System hardware and architecture improvements, Anti-Submarine Warfare (ASW) and Anti-Surface Warfare (ASuW) sensor improvements, communication capability upgrades, ASuW Net Enabled Weapon (NEW), Higher-Than-Secret (HTS) security capability and High Altitude ASW Weapons Capability (HAAWC) datalink.												
These capabilities will be developed as a series of ECPs for the P-8A and are as follows:												
- ECP 4 - Software upgrades to Narrowband SATCOM and Targeting.												
- ECP 5 - Net Enabled Weapon, High Frequency radio Internet Protocol (HF-IP), Integrated Broadcast Service (IBS) filtering, IBS receiver, and Harpoon II+.												
- ECP 6 - Applications Based Architecture (ABA) and Combat System, Anti-Submarine Warfare (ASW) capability, Wide Band SATCOM, Higher Than Secret (HTS) processing, ASW SIGINT, and Enhanced track management (Minotaur).												
- ECP 7 - Enhanced Multi-Static Active Coherent (MAC).												
To expedite fielding capability to the P-8A Fleet, ECPs 4, 5, and 6 are executed concurrently as these capabilities are independent of one another. However, Enhanced MAC (ECP 7) is reliant on ECP 6's Combat System hardware and architecture to operate on the P-8A.												
Note: Enhanced MAC (ECP 7) is developed within Program Element 0604261N and integrated into the platform within this PE.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Perform technology demonstrations and analyses of proposed new capabilities								82.834	157.245	154.670	0.000	154.670
Articles:								-	-	-	-	-
FY 2016 Accomplishments:												
Continued execution of Spiral 2 (Increment 3) Applications Based Architecture (ABA) system development, Risk Reduction Interface and Capability Analysis contracting efforts. Developed and awarded competitive Wide Band SATCOM system hardware procurement contract. Continued Lead Capability Integrator (LCI), core Combat System architecture prototyping, capability application prototyping, and integration analysis efforts. Continued												

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Capability Development and Integration Engineering Change Proposal (ECP) maturity efforts to include Anti-Submarine Warfare (ASW) capability, Wide Band SATCOM, Net Enabled Weapon, and Sensor Upgrades. Continued P-8A TOC design and integration efforts. Prepared, created, and conducted program Milestone activities in preparation of formal "Ready For Proposal (RFP) Release" Milestone. FY 2017 Plans: Continue execution of Spiral 2 (Increment 3) Applications Based Architecture (ABA) system development, Risk Reduction Interface and Capability Analysis contracting efforts. Develop and award competitive Wide Band SATCOM system hardware procurement contract. Continue Lead Capability Integrator (LCI) and integration analysis efforts. Continue Capability Development and Integration Engineering Change Proposal (ECP) maturity efforts to include Anti-Submarine Warfare (ASW) capability, Wide Band SATCOM, Net Enabled Weapon, and Sensor Upgrades. Continue P-8A TOC design and integration efforts. Additionally, will initiate the Combat System Hardware effort which consists of an updated ABA computing architecture integrated with the existing P-8 mission system. FY 2018 Base Plans: Continue execution of Spiral 2 (Increment 3) Lead Capability Integrator (LCI) and integration efforts including further Applications Based Architecture (ABA) system development. Continue Capability Integration and Engineering Change Proposal (ECP) 4, 5, and 6 efforts to include Anti-Submarine Warfare (ASW) capability, Wide Band SATCOM, Net Enabled Weapon, and Sensor Upgrades. Continue P-8A Tactical Operations Center (TOC) design and integration efforts. Additionally, will continue the Combat System Hardware effort and associated Platform Integration efforts. Initial fielding of ECP4. Continue Increment 3 training system development. FY 2018 OCO Plans: N/A						
Title: Conduct technical, cost, risk and logistics analysis of proposed technologies Articles:		6.852 -	24.975 -	27.061 -	0.000 -	27.061 -
FY 2016 Accomplishments: Conducted technical, cost, risk and logistics analysis of proposed technologies. Evaluated system requirements through cost/performance trade-off analysis. Provided technical and management support for the development						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<p>of acquisition documentation. Provided engineering and management of technical development effort. Increase in government led prototyping.</p> <p>FY 2017 Plans: Continue in-house government Lead Capability Integrator (LCI) activities and prototyping, Capability Development and Integration Engineering Change Proposal (ECP) efforts for Increment 3 capabilities. Conduct technical, cost, risk and logistics analysis of proposed technologies. Provide engineering and management of technical development efforts. Evaluate system performance and verify requirements through test and evaluation and update program documentation as necessary.</p> <p>FY 2018 Base Plans: Continue in-house government Lead Capability Integrator (LCI) activities, Capability Development and Integration Engineering Change Proposal (ECP) 4, 5, and 6 efforts for Increment 3 capabilities. Conduct technical, cost, risk and logistics analysis of proposed technologies. Provide engineering and management of technical development efforts. Evaluate system performance and verify requirements through test and evaluation and update program documentation as necessary. Initial fielding of ECP 4</p> <p>FY 2018 OCO Plans: N/A</p>					
Accomplishments/Planned Programs Subtotals	89.686	182.220	181.731	0.000	181.731

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• APN/0586: P-8 Series	28.092	18.836	18.665	-	18.665	186.990	215.321	212.427	210.566	2,135.144	3,068.322
Remarks BLI0586 reflects the P-8A total program funding not just Increment 3.											
D. Acquisition Strategy As part of the P-8A evolutionary acquisition strategy, Spiral 2 (Increment 3) will incorporate the capabilities defined in the JROC approved P-8A Increment 2/3 Capability Development Document. These capabilities will be developed as a series of ECP's for the P-8A and Tactical Operations Center (ground support facility) similar to the approach used for Increment 2.											

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<p>These ECPs are:</p> <p>ECP 4 - Software upgrades to Narrowband SATCOM and Targeting.</p> <p>ECP 5 - Net Enabled Weapon, High Frequency radio Internet Protocol (HF-IP), Integrated Broadcast Service (IBS) filtering, IBS receiver, and Harpoon II+.</p> <p>ECP 6 - Applications Based Architecture (ABA) and Combat System, Anti-Submarine Warfare (ASW) capability, Wide Band SATCOM, Higher Than Secret (HTS) processing, ASW SIGINT, and Enhanced track management (Minotaur).</p> <p>ECP 7 - Enhanced Multi-Static Active Coherent (MAC).</p> <p>To expedite fielding capability to the P-8A Fleet, ECPs 4, 5, and 6 are executed concurrently as these capabilities are independent of one another. However, Enhanced MAC (ECP 7) is reliant on ECP 6's Combat System hardware and architecture to operate on the P-8A.</p> <p>Note: Enhanced MAC (ECP 7) is developed within Program Element 0604261N and integrated into the platform within this PE.</p> <p><u>E. Performance Metrics</u></p> <p>Continue development of capability ECPs.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy												Date: May 2017			
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Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hdw Dev - RR Interface	C/CPIF	Boeing : Seattle, WA	0.000	5.803	Oct 2015	0.000		0.000		-		0.000	0.000	5.803	5.803
Primary HW Dev - Capability Analysis	C/CPFF	Boeing : Seattle, WA	0.000	8.917	Nov 2015	0.000		0.000		-		0.000	0.000	8.917	8.917
Primary HW Dev - Capability Dev & Integration	C/CPFF	Boeing : Seattle, WA	0.000	15.142	Jun 2016	36.656	Oct 2016	35.101	Oct 2017	-		35.101	30.101	117.000	117.000
Primary HW Dev - Capability Dev & Integration	TBD	Boeing : St. Louis, MO	0.000	0.000		0.000		7.940	Nov 2017	-		7.940	65.413	73.353	-
Primary HW Dev - ABA SW Dev Vendor A	C/CPIF	Raytheon : Dallas, TX	0.000	6.156	Mar 2016	3.508	Oct 2016	0.000		-		0.000	0.000	9.664	9.664
Primary HW Dev - ABA SW Dev Vendor B	C/CPIF	Lockheed Martin : Manassas, VA	0.000	6.156	Mar 2016	3.930	Oct 2016	0.000		-		0.000	0.000	10.086	10.086
Primary HW Dev - Combat Systems Hardware Effort	Various	NSWC : Crane, IN	0.000	0.000		5.488	Jun 2017	27.906	Jun 2018	-		27.906	25.806	59.200	-
Primary HW Dev - Platform Integration	C/CPFF	Boeing : Seattle, WA	0.000	0.000		69.900	Jun 2017	45.212	Jan 2018	-		45.212	204.807	319.919	319.919
Primary HW Dev - Wideband SATCOM	C/CPFF	AMEWAS : California, MD	0.000	2.000	Jul 2016	8.000	Oct 2016	0.000		-		0.000	0.000	10.000	10.000
RCI2 - ECP3	C/CPFF	Boeing : Seattle, WA	0.000	14.317	Mar 2016	3.000	Oct 2016	0.000		-		0.000	0.000	17.317	17.317
LCI Development & Integration	Various	Various : Various	0.000	15.240	Jul 2016	14.252	Oct 2016	25.194	Oct 2017	-		25.194	81.393	136.079	-
Sys Eng (gov)	WR	NAWC AD : Pax River, MD	0.000	9.103	Nov 2015	12.511	Nov 2016	13.317	Nov 2017	-		13.317	42.235	77.166	-
Subtotal			0.000	82.834		157.245		154.670		-		154.670	449.755	844.504	-

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Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Sup	WR	NAWC AD : Pax River, MD	0.000	0.625	Nov 2015	0.915	Nov 2016	0.689	Nov 2017	-		0.689	3.672	5.901	-
Studies & Analysis	C/CPFF	JHU : Pax River, MD	0.000	3.045	Jul 2016	0.841	Nov 2016	3.105	Nov 2017	-		3.105	0.000	6.991	6.991
Subtotal			0.000	3.670		1.756		3.794		-		3.794	3.672	12.892	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval	WR	NAWC AD : Pax River, MD	0.000	1.421	Oct 2015	12.111	Nov 2016	11.847	Nov 2017	-		11.847	Continuing	Continuing	Continuing
GFE/GFI/GFP	WR	NAWC AD : Pax River, MD	0.000	0.077	Nov 2015	4.266	Nov 2016	4.590	Nov 2017	-		4.590	15.147	24.080	-
Oper Test & Eval	WR	NAWC AD : Pax River, MD	0.000	0.000		0.000		0.000		-		0.000	93.452	93.452	-
Test Assets	WR	NAWC AD : Pax River, MD	0.000	0.000		0.000		0.000		-		0.000	47.488	47.488	-
Subtotal			0.000	1.498		16.377		16.437		-		16.437	-	-	-
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng Tech Serv (NON-FFRDC)	C/CPFF	Various : Various	0.000	0.118	Dec 2015	1.090	Nov 2016	1.109	Nov 2017	-		1.109	1.129	3.446	3.446
Mgmt Suppt Serv (NON-FFRDC)	C/CPFF	RBC : Alexandria, VA	0.000	0.573	Dec 2015	3.693	Nov 2016	3.703	Nov 2017	-		3.703	8.356	16.325	16.325
Program Mgmt Support	WR	NAWC AD : Pax River, MD	0.000	0.918	Dec 2015	1.959	Nov 2016	1.918	Nov 2017	-		1.918	2.969	7.764	-
Travel	Allot	NAWC AD : Pax River, MD	0.000	0.075	Oct 2015	0.100	Nov 2016	0.100	Nov 2017	-		0.100	0.400	0.675	-

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Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	1.684		6.842		6.830		-		6.830	12.854	28.210	-

Remarks
Continued engineering and management support reflected in FY16 profile are necessary to continue LCI efforts.

	Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	89.686		182.220		181.731		-		181.731	-	-	-

Remarks

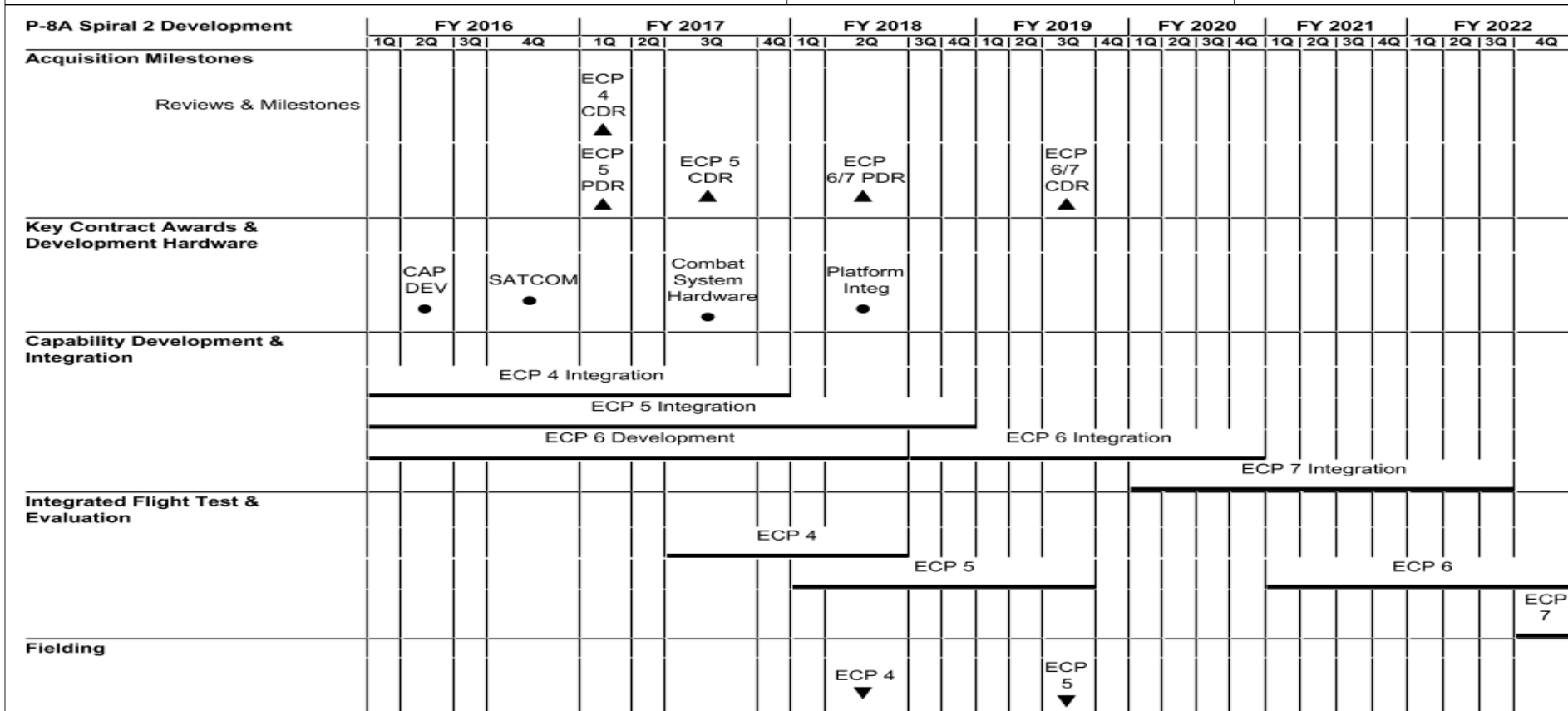
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PE 0605504N: (U)Multi-Mission Maritime (MMA) Incremen...
Navy

R-1 Line #161

R-1 Program Element (Number/Name)
PE 0605504N / (U)Multi-Mission Maritime
(MMA) Increment III

Project (Number/Name)	3218 / P-8A Spiral 2 Development
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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Navy			Date: May 2017
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
P-8A Spiral 2 Development				
Acquisition Milestones: Reviews & Milestones: ECP 4 Critical Design Review (CDR)	1	2017	1	2017
Acquisition Milestones: Reviews & Milestones: ECP 5 Preliminary Design Review (PDR)	1	2017	1	2017
Acquisition Milestones: Reviews & Milestones: ECP 5 Critical Design Review (CDR)	3	2017	3	2017
Acquisition Milestones: Reviews & Milestones: ECP 6/7 Preliminary Design Review (PDR)	2	2018	2	2018
Acquisition Milestones: Reviews & Milestones: ECP 6/7 Critical Design Review (CDR)	3	2019	3	2019
Key Contract Awards & Development Hardware: Capabilities Development (CAP DEV)	2	2016	2	2016
Key Contract Awards & Development Hardware: SATCOM	4	2016	4	2016
Key Contract Awards & Development Hardware: Combat System Hardware	3	2017	3	2017
Key Contract Awards & Development Hardware: Platform Integration	2	2018	2	2018
Capability Development & Integration: ECP 4 Integration	1	2016	4	2017
Capability Development & Integration: ECP 5 Integration	1	2016	4	2018
Capability Development & Integration: ECP 6 Development	1	2016	2	2018
Capability Development & Integration: ECP 6 Integration	3	2018	4	2020
Capability Development & Integration: ECP 7 Integration	1	2020	3	2022
Integrated Flight Test & Evaluation: ECP 4	3	2017	2	2018
Integrated Flight Test & Evaluation: ECP 5	1	2018	3	2019
Integrated Flight Test & Evaluation: ECP 6	1	2021	4	2022
Integrated Flight Test & Evaluation: ECP 7	4	2022	4	2022
Fielding: ECP 4	2	2018	2	2018
Fielding: ECP 5	3	2019	3	2019