Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy	Date: March 2019
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0304240M *I (U)Advanced Tactical Unmanned Aircraft System*

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	0.000	5.200	17.561	21.157	-	21.157	26.649	24.510	61.725	62.959	Continuing	Continuing
3135: *USMC MUX Medium Altitude - Long Endurance (MALE) Group 5 UAV*	0.000	4.978	12.708	21.157	-	21.157	26.649	24.510	61.725	62.959	Continuing	Continuing
3427: *KMAX Experimentation and Support*	0.000	0.222	4.853	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.075

A. Mission Description and Budget Item Justification

This program element provides for development and capability requirements for Advanced Tactical Unmanned Aerial Vehicles in support of expeditionary efforts Projects are Joint Military Intelligence Programs.

Project 3135 - This project provides technical concept maturation and experimentation for the Marine Air Ground Task Force (MAGTF) Unmanned Aircraft System (UAS) Expeditionary (MUX) with Vertical/Short Take-Off and Vertical Landing (V/STOVL) capability. MUX is determined to be a critical capability for current and future USMC expeditionary operations. These MUX efforts will include development of system architectures and rapid prototyping of critical system components to inform a future MUX program of record. Resulting work products will mitigate technical risks through analysis, modeling and simulation matched with refined CONOPS development, Analysis of Alternative development, prototype development, and testing at the component-level and will leverage real-time data used on deployed USMC MQ-9. Threshold capabilities will include, Airborne Early Warning, Intelligence Surveillance Reconnaissance, Electronic Warfare and Communications Control. Objective capabilities will include strike, airborne escort, and cargo resupply. Provides USMC with MUX operational capability in FY26.

Project 3427 - This project provides for experimentation and support of the CQ-24A Cargo UAS (commonly referred to as KMAX). CQ-24A will be used for experimentation to specifically inform the unmanned cargo resupply requirements of future programs of record, to include MUX and other unmanned air programs. Experimentation includes payloads/sensor integration, control station integration, Concept of Operations (CONOPS) and Tactics, Techniques, and Procedures (TTP) development. These experimentation efforts inform program capability documents, support other military exercises, and advance technologies needed for the future MUX Program Of Record. Additionally, this program allows for government, industry teams, and other stakeholders to collaboratively develop key sensor technologies used to inform future VTOL aircraft. These efforts will include continued development of autonomous obstacle avoidance systems that have dual military-commercial use, such as natural disaster response and combatting wild fires, enabling cargo delivery in austere environments.

Cost estimate for Cost to Complete and Total Cost for both project units are being developed and will be promulgated in a future budget request.

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy					Date: March 2019
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*			R-1 Program Element (Number/Name) PE 0304240M *I (U)Advanced Tactical Unmanned Aircraft System*		
B. Program Change Summary ($ in Millions)	**FY 2018**	**FY 2019**	**FY 2020 Base**	**FY 2020 OCO**	**FY 2020 Total**
Previous President's Budget	7.979	25.291	26.770	-	26.770
Current President's Budget	5.200	17.561	21.157	-	21.157
Total Adjustments	-2.779	-7.730	-5.613	-	-5.613
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-7.730			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	-5.602	-	-5.602
• Rate/Misc Adjustments	0.000	0.000	-0.011	-	-0.011
• Congressional Directed Reductions Adjustments	-2.779	-	-	-	-

Change Summary Explanation

The FY 2020 funding request was reduced by $1.00M to account for the availability of prior year execution balances.

Decrease in FY 2020 due to KMAX Experimentation and Support project which will not be used as a method for concept of operations (CONOPS) development.

Schedule:
Project 3135 - Updated to reflect MUX experimentation requirements.
Project 3427 - Not applicable

Technical: Not applicable

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	Project (Number/Name) 3135 / *USMC MUX Medium Altitude - Long Endurance (MALE) Group 5 UAV*	

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
3135: *USMC MUX Medium Altitude - Long Endurance (MALE) Group 5 UAV*	0.000	4.978	12.708	21.157	-	21.157	26.649	24.510	61.725	62.959	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Funding provides for the development of system architectures, Analysis of Alternatives, experimentation, key technology maturation, rapid prototyping, and concept refinement for the Marine Air Ground Task Force (MAGTF) Unmanned Aircraft System (UAS) Expeditionary (MUX) with Vertical/Short Take-Off and Vertical Landing (V/STOVL) capability. The MUX UAV supports Expeditionary Force 21 Operating Concepts and the 2017 Marine Aviation Plan (AvPlan) which require an advanced, multi-mission ship-based Group 5 UAS in support of Marine Expeditionary Force/Marine Expeditionary Brigade-sized MAGTF to address capability gaps. The future MUX UAV system will provide a weaponized, payload flexible, shipboard capable/expeditionary system that is runway independent for all weather, long range/persistence, operations from the sea in a contested environment. This next generation UAV capability will have far greater range, endurance, altitude, and payload capability than the current conventional Vertical Take Off and Landing (VTOL) technology can provide from air capable ships. The MUX system Initial Capabilities Document (ICD) was approved in Oct 2016. The Analysis of Alternatives (AOA) efforts commenced in FY18. Rapid prototyping strategies are also being pursued by the USMC to meet an early operational need date.

This effort will continue to refine program scope, phasing, and cost for development of the MUX capability. Funding in FY20 will also be used to reduce overall MUX program cost by leveraging other technology developmental programs, such as developmental communications/networking payloads capabilities, and USMC MQ-9 deployed services, allowing for continued technical maturation effort, rapid prototyping, and effective transition to a MUX POR.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: MUX Studies, Analysis, Experimentation and Concept Refinement	3.650	10.068	18.482	0.000	18.482
Articles:	-	-	-	-	-
FY 2019 Plans: Provides funding for Government and industry teams for acquisition activities including industry inquiries, aircraft trade studies, concept refinement, requirements/payload analysis, and rapid prototyping efforts related to the MUX POR. Supports continued development of the MUX Concept of Operations and draft CDD. Provides funding for experimentation with advanced concept demonstrator UAVs such as USMC CQ-24A Cargo UAS, DARPA/ONR developed Tern UAS, and US Army AMRDEC JMR-TD aircraft projects, along with other tactical UAV/payload/control station demonstrator efforts, to help inform tactical unmanned system performance requirements, initial KPP, CONOPS, concepts, tactics, doctrine, the future MUX program of record, and support					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	**Project (Number/Name)** 3135 / *USMC MUX Medium Altitude - Long Endurance (MALE) Group 5 UAV*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
rapid prototyping efforts. Provides funding for engineering architecture assessments (aircraft and payloads) to establish specific areas where the government will function as the systems integrator. ***FY 2020 Base Plans:*** Planned efforts include continued development of capability architecture, model based system engineering from aircraft trade studies to analyze system architecture. Validate capability to CONOPS requirement documentation for future contracting actions, and rapid prototyping efforts related to the MUX POR. Supports continued development of the MUX Concept of Operations and draft CDD. Provide for experimentation with advanced concept payloads and control station demonstrator efforts to identify tactical unmanned system performance requirements in support of KPP refinement, tactics, and support rapid prototyping efforts. Continue issuance of second Broad Agency Announcement and conduct initial Materiel Development Decision (MDD) review. ***FY 2020 OCO Plans:*** N/A ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Increase due to amplified efforts for modeling and simulation. Continued vendor study contracts through the release of the second Broad Agency Announcement (BAA) and conceptual design beginning in FY20.					
Title: Technical and Engineering Services	1.328	2.640	2.675	0.000	2.675
Articles:	-	-	-	-	-
FY 2019 Plans: Provide Government Engineering support, Contractor support, Program support and travel for execution of MUX studies, experimentation, rapid prototyping, and concept refinement and for pre-MS A related acquisition activities to support the future MUX program of record. ***FY 2020 Base Plans:*** Provide Government Engineering support, Contractor support, Program support and travel for execution of MUX architecture development, component-level prototyping, modeling & simulation, development of AOA, analysis of data provided by DOD developmental programs. ***FY 2020 OCO Plans:*** N/A ***FY 2019 to FY 2020 Increase/Decrease Statement:***					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	**Project (Number/Name)** 3135 / *USMC MUX Medium Altitude - Long Endurance (MALE) Group 5 UAV*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Increase in FY20 due to requirements generation, analysis, and contract preparations which includes building Request For Proposal (RFP).					
Accomplishments/Planned Programs Subtotals	4.978	12.708	21.157	0.000	21.157

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

A Material Development Decision is anticipated in FY20. The MUX program will leverage other technology developmental programs, such as developmental communications/networking payloads capabilities, and USMC MQ-9 deployed services, Original Equipment Manufacturer internally funded UAV prototypes when available, existing tactical unmanned technologies, and promising new industry design concepts that result from industry trade studies. The government will develop and award study contracts as required to support program activities and analysis efforts. Assessment of available technology from existing S&T efforts and review of industry inquiries / study contracts will be used to determine the optimum MUX strategy. Delivery of MUX capability may be met through an accelerated acquisition approach and spiral development.

E. Performance Metrics

Performance metrics include successful completion of Trade Studies; successful development of a CONOPS AOA and draft CDD, identification of material solutions for concept refinement, and analysis of architectures.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	**Project (Number/Name)** 3135 / *USMC MUX Medium Altitude - Long Endurance (MALE) Group 5 UAV*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MUX Studies and Experimentation	Various	TBD : TBD	0.000	1.500	Jan 2018	8.045	Nov 2018	15.525	Nov 2019	-		15.525	Continuing	Continuing	Continuing
Requirements Analysis and Engineering Assessments	WR	Various : Various	0.000	2.150	Jan 2018	2.023	Nov 2018	2.957	Nov 2019	-		2.957	Continuing	Continuing	Continuing
		Subtotal	0.000	3.650		10.068		18.482		-		18.482	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWCAD : Patuxent River, MD	0.000	0.635	Jan 2018	1.252	Nov 2018	1.337	Nov 2019	-		1.337	0.000	3.224	-
Program Management Support	Various	Various : Various	0.000	0.600	Jan 2018	1.268	Nov 2018	1.248	Nov 2019	-		1.248	0.000	3.116	-
Travel	WR	NAWCAD : Patuxent River, MD	0.000	0.093	Jan 2018	0.120	Nov 2018	0.090	Nov 2019	-		0.090	0.000	0.303	-
		Subtotal	0.000	1.328		2.640		2.675		-		2.675	0.000	6.643	N/A

	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	4.978		12.708		21.157		-		21.157	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	**Project (Number/Name)** 3135 / *USMC MUX Medium Altitude - Long Endurance (MALE) Group 5 UAV*

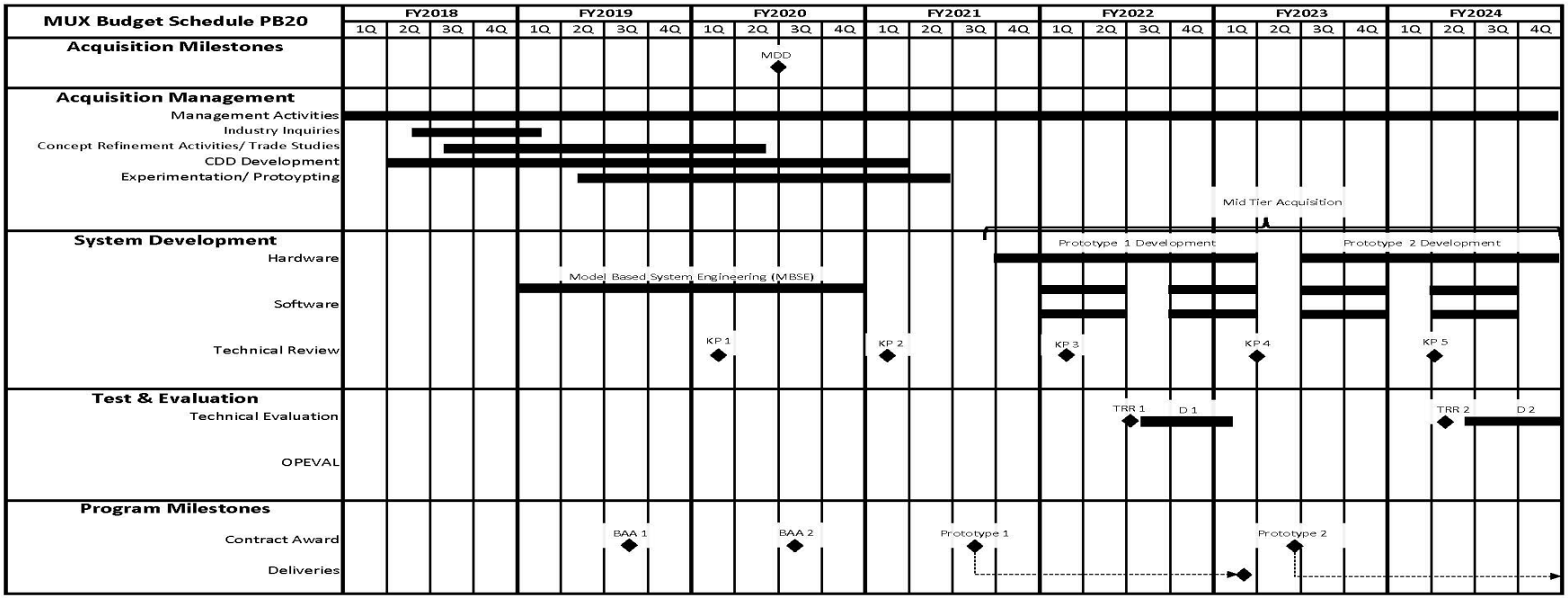


Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	**Project (Number/Name)** 3135 / *USMC MUX Medium Altitude - Long Endurance (MALE) Group 5 UAV*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3135				
Acquistion Milestones: MDD	2	2020	2	2020
Acquistion Milestones: Acquisition Management Activities: Program Management Activities	1	2018	4	2024
Acquistion Milestones: Acquisition Management Activities: Industry Inquiries	2	2018	1	2019
Acquistion Milestones: Acquisition Management Activities: Concept Refinement Activities/ Trade Studies	3	2018	2	2020
Acquistion Milestones: Acquisition Management Activities: CDD Development	2	2018	2	2021
Acquistion Milestones: Acquisition Management Activities: Experimentation/ Protoypting	2	2019	3	2021
System Development: Hardware	1	2018	1	2024
System Development: P1	3	2021	1	2023
System Development: P2	2	2023	4	2024
System Development: Software	1	2018	1	2024
System Development: Model Based System Engineering	1	2019	1	2021
System Development: Technical Review	1	2018	1	2024
Test & Evaluation: Technology Readiness Review (I)	2	2023	2	2024
Test & Evaluation: Technology Readiness Review (II)	4	2024	4	2024
Progam Milestones: Broad Agency Announcement (I)	3	2019	3	2019
Progam Milestones: Broad Agency Announcement (II)	3	2020	3	2020
Progam Milestones: Protype (I)	2	2021	2	2021
Progam Milestones: Protype (II)	2	2023	2	2023

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	Project (Number/Name) 3427 / *KMAX Experimentation and Support*	

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
3427: *KMAX Experimentation and Support*	0.000	0.222	4.853	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.075
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Funding provides for experimentation for unmanned cargo operations and includes complementary Intelligence, Surveillance, and Reconnaissance (ISR), payloads, advanced sensors, autonomy; efforts to refine requirements and concept of operations (CONOPS); and support of future unmanned programs of record.

The program's two Marine Corps CQ-24A were successfully utilized in Afghanistan to support urgent operational needs in that theater of operations. The two CQ-24A aircraft and ground control system require contractor services to operate. Utilization of existing CQ-24A systems is an efficient risk reduction method.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: CQ-24A Cargo UAS Experimentation and Support Services	0.222	3.849	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2019 Plans: Provides funding for government and industry teams to develop key sensor technologies needed for future VTOL aircraft. This includes continued development of autonomous obstacle avoidance and landing systems for dual military-commercial use, such as natural disaster response and combatting wild fires, allowing for cargo delivery in austere environments. Additionally, funding supports the continued development and integration of unique satellite communication systems designed for over-the-horizon use and operation in line-of-sight constrained environments. This combined capability will be demonstrated on the CQ-24A as part of a Cooperative Research and Development Agreement (CRADA) between the Navy and industry partners. Provides funding for engineering studies and architecture assessments (aircraft and payloads) to inform the future Cargo UAS requirements.					
FY 2020 Base Plans: N/A					
FY 2020 OCO Plans: N/A					
FY 2019 to FY 2020 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	**Project (Number/Name)** 3427 / *KMAX Experimentation and Support*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Decrease due to Expeditionary Force 21 Operating Concepts and the 2017 Marine Aviation Plan (AvPlan), do not support continued use of KMAX as a method for CONOPS developments.					
Title: Technical and Engineering Services	0.000	1.004	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2019 Plans: Provide government engineering support, contractor support, program support and travel for execution of CQ-24A Cargo UAS experimentation and concept refinement for study products and acquisition activities to support future programs of record, to include MUX. ***FY 2020 Base Plans:*** N/A ***FY 2020 OCO Plans:*** N/A ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Decrease due to minimal government engineering support required for DMIL process.					
Accomplishments/Planned Programs Subtotals	0.222	4.853	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The CQ-24A Cargo UAS experimentation and support activities will be contracted through a sole source contract with the aircraft prime vendor and through other contracts to sensor/communication vendors that are currently developing the AACUS and SATCOM capabilities for NAVAIR, including the use of small business.

Future Cargo UAS resupply requirements are being defined through USMC logistics efforts to identify accelerated acquisition opportunities to provide an early desired deployment date 2025 with transition to a future Program of Record at a later time.

E. Performance Metrics

Performance metrics include successful completion of technical demonstration with published reports and CONOPS updates, along with inputs to unmanned cargo re-supply requirements for capability documents and performance specifications.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	Project (Number/Name) 3427 / *KMAX Experimentation and Support*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CQ-24A Cargo UAS Experimentation	C/CPFF	Kaman : Bloomfield, CT	0.000	0.222	Feb 2019	3.239	Mar 2019	0.000		-		0.000	0.000	3.461	4.750
Requirements and Analysis, and Engineering Assessments	WR	NAWCAD : Patuxent River, MD	0.000	0.000	Jan 2018	0.610	Mar 2019	0.000		-		0.000	0.000	0.610	1.190
		Subtotal	0.000	0.222		3.849		0.000		-		0.000	0.000	4.071	N/A

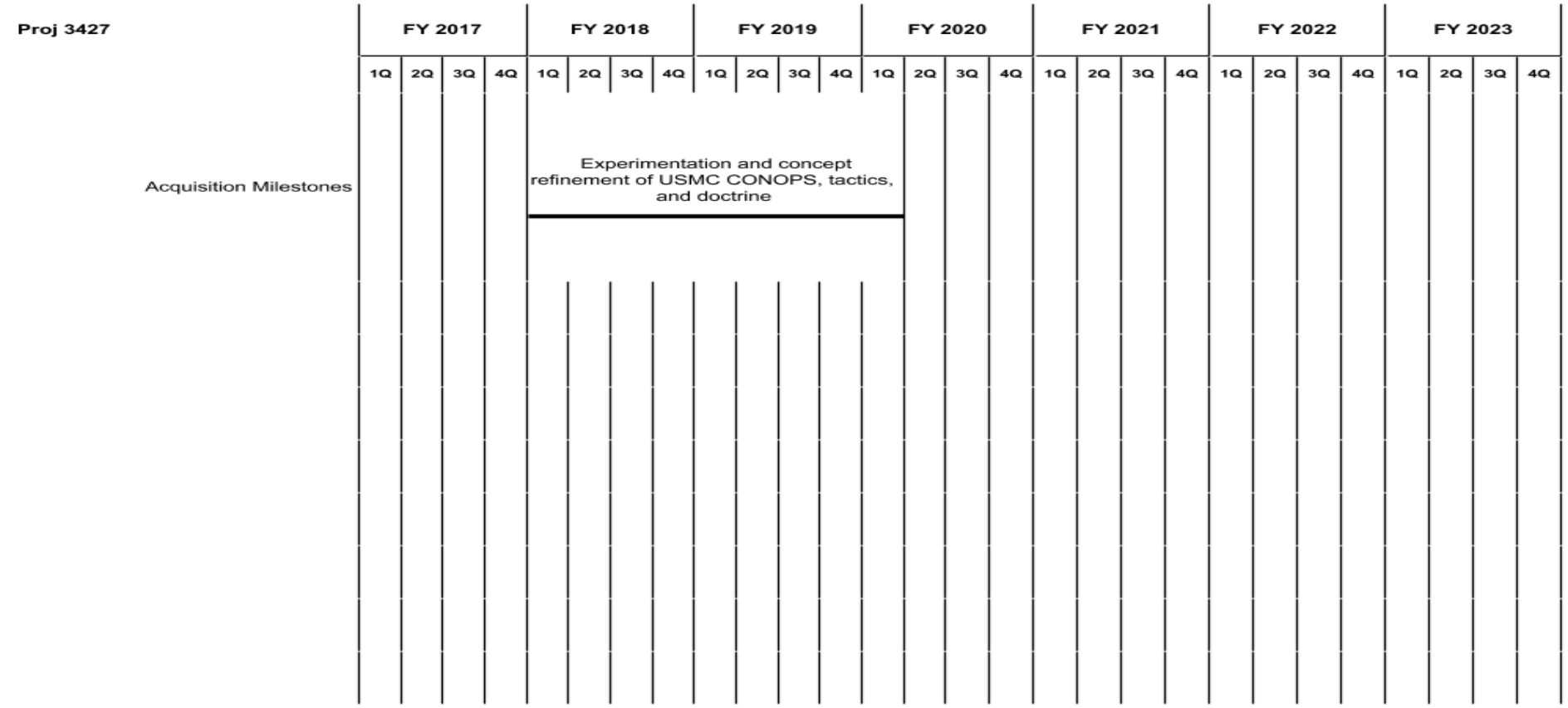
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Govt Engineering Support	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.474	Nov 2018	0.000		-		0.000	0.000	0.474	-
Program Management Support	Various	Various : Various	0.000	0.000	Jan 2018	0.450	Nov 2018	0.000		-		0.000	0.000	0.450	-
Travel	WR	NAWCAD : Patuxent River, MD	0.000	0.000	Jan 2018	0.080	Nov 2018	0.000		-		0.000	0.000	0.080	-
		Subtotal	0.000	0.000		1.004		0.000		-		0.000	0.000	1.004	N/A

	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.222		4.853		0.000		-		0.000	0.000	5.075	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	**Project (Number/Name)** 3427 / *KMAX Experimentation and Support*



2019PB - 0304240M - 3427

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0304240M / *(U)Advanced Tactical Unmanned Aircraft System*	**Project (Number/Name)** 3427 / *KMAX Experimentation and Support*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3427				
Acquisition Milestones: Experimentation and concept refinement of USMC CONOPS, tactics, and doctrine	1	2018	1	2020