Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy												Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305234N *I Small (Level 0) Tactical UAS (STUASL0)*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	89.132	9.410	8.773	1.772	-	1.772	-	-	-	-	-	-
3192: *RQ-21 BLACKJACK*	89.132	9.410	8.773	1.772	-	1.772	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The RQ-21A BLACKJACK (formerly known as The Small Tactical Unmanned Aircraft System (STUAS)) is a combined United States Navy (USN) and United States Marine Corps (USMC) program that provides persistent maritime and land-based tactical Intelligence, Surveillance, and Reconnaissance/Target Acquisition support for tactical level maneuver decisions and unit level force defense/force protection for Naval amphibious assault ships (multi-ship classes) and Navy and Marine land forces. This system will support Naval Missions such as building the Recognized Maritime Picture, Maritime Security Operations, Maritime Interdiction Operations, and provide support for Naval Units operating from sea/shore in Overseas Contingency Operations. This submission is the USNs portion of the program and has been coordinated with the USMC budget submission PE 0305239M (RQ-21A).

The RQ-21A BLACKJACK system will continue to evolve and upgrade capabilities to satisfy capabilities shortfalls, new requirements, and reliability, maintainability and safety issues. Upgraded capabilities may include Navy Command and Control integration, Extended Range, Weapons Integration, Heavy Fuel Engine, Laser Designator, Frequency Agile Communications Relay, Airborne Precision Engagement and Targeting, Digital Common Data Link, and cyclic refresh of the Electro-Optical/Infrared camera. RQ-21A BLACKJACK will continue to expand its shipboard capability across new ship classes.

This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it includes development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**
Previous President's Budget	9.410	8.773	6.039	-	6.039
Current President's Budget	9.410	8.773	1.772	-	1.772
Total Adjustments	0.000	0.000	-4.267	-	-4.267
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	-4.058	-	-4.058
• Rate/Misc Adjustments	0.000	0.000	-0.209	-	-0.209

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305234N *I Small (Level 0) Tactical UAS (STUASL0)*

Change Summary Explanation

Funding: The FY 2022 funding request was reduced by $2.259M million to account for the availability of prior year execution balances; $1.799M for cancelation of Production Development/Upgrade Efforts such as Extended Range, improve turret optics and target acquisition capability, or upgrades to reduce recovery damage and decrease the system's expeditionary footprint; and $0.209M for miscellaneous rate adjustments.

Schedule: Revised to reflect the program's latest procurement funding profile.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305234N / *Small (Level 0) Tactical UAS (STUASL0)*	Project (Number/Name) 3192 / *RQ-21 BLACKJACK*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
3192: *RQ-21 BLACKJACK*	89.132	9.410	8.773	1.772	-	1.772	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The RQ-21A BLACKJACK (formerly known as The Small Tactical Unmanned Aircraft System (STUAS)) is a combined United States Navy (USN) and United States Marine Corps (USMC) program that provides persistent maritime and land-based tactical Intelligence, Surveillance, and Reconnaissance/Target Acquisition support for tactical level maneuver decisions and unit level force defense/force protection for Naval amphibious assault ships (multi-ship classes) and Navy and Marine land forces. This system will support Naval Missions such as building the Recognized Maritime Picture, Maritime Security Operations, Maritime Interdiction Operations, and provide support for Naval Units operating from sea/shore in Overseas Contingency Operations. This submission is the USNs portion of the program and has been coordinated with the USMC budget submission PE 0305239M (RQ-21A).

The RQ-21A BLACKJACK system will continue to evolve and upgrade capabilities to satisfy capabilities shortfalls, new requirements, and reliability, maintainability and safety issues. Upgraded capabilities may include Navy Command and Control integration, Alternate Navigation, Anti-Jamming GPS, Anti-Collision Lighting, Visual Detection and Ranging, Spectrum Enhancements, Weapons Integration, Extended Range, Heavy Fuel Engine, Laser Designator, Frequency Agile, Communications Relay, Airborne Precision Engagement and Targeting, Digital Common Data Link, new launch and recovery methods, parts durability and manufacturability, and cyclic refresh of the Electro-Optical/Infrared (EO/IR) camera. RQ-21A BLACKJACK will also continue to expand its shipboard capability across new ship classes.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Product Development/Upgrade Efforts	6.017	5.286	1.000	0.000	1.000
Articles:	-	-	-	-	-
FY 2021 Plans: The program will perform investigations, studies, and continue prototype efforts for a Vertical Takeoff and Landing (VTOL) capability for RQ-21A platform. The program will improve the ability of the RQ-21A air vehicle to recover in a GPS denied environment and continue upgrades to reduce recovery damage, increase Propulsion Module Unit (PMU) performance and reliability, improved turret optics and target acquisition capability, and decreasing the system's expeditionary footprint. The program will perform software development and trade studies to correct deficiencies from test as well as enable additional capabilities such as Extended Range and enable a block upgrade of multiple system components at a time.					
FY 2022 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305234N / *Small (Level 0) Tactical UAS (STUASL0)*	**Project (Number/Name)** 3192 / *RQ-21 BLACKJACK*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
The program will perform investigations, studies, and continue prototype efforts for an Airborne Precision Engagement and Targeting capability, and Weapons integration capability for RQ-21A platform. The program will improve the ability of the RQ-21A air vehicle to recover in a GPS denied environment and continue upgrades to command and control, reduce recovery damage, increase Propulsion Module Unit (PMU) performance and reliability, improved turret optics and target acquisition capability, and decreasing the system's expeditionary footprint. The program will perform software development and trade studies to correct deficiencies from test as well as enable additional capabilities such as Extended Range and enable a block upgrade of multiple system components at a time. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease between FY21 and FY22 is due to the removal of the VTOL requirement.					
Title: Engineering Support	3.393	3.487	0.772	0.000	0.772
Articles:	-	-	-	-	-
FY 2021 Plans: Continue Government Engineering Technical Support, Test and Evaluation, other Government Support, Contract Support Services, Program Management Support, and program related travel in support of correction of deficiencies and upgrade efforts.					
FY 2022 Base Plans: Continue Government Engineering Technical Support, Test and Evaluation, other Government Support, Contract Support Services, Program Management Support, and program related travel in support of correction of deficiencies.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305234N / *Small (Level 0) Tactical UAS (STUASL0)*	**Project (Number/Name)** 3192 / *RQ-21 BLACKJACK*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Decrease between FY21 and FY22 is due to reduced engineering support because of removal of the VTOL requirement.					
Accomplishments/Planned Programs Subtotals	9.410	8.773	1.772	0.000	1.772

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• APN/0444: *STUASLO*	40.740	37.650	13.151	-	13.151	-	-	-	-	-	-
• RDTEN/0305239M: *(U)RQ-21A*	10.914	10.853	0.000	-	0.000	-	-	-	-	-	-
• APN/0598: *RQ-21 Series*	58.032	7.794	14.123	-	14.123	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

The program office has utilized a competitive acquisition approach for award of the Engineering and Manufacturing Development effort to field a capability that meets threshold requirements. Low Rate Initial Production (LRIP) test article was utilized to successfully complete Initial Operational Test and Evaluation (IOT&E). LRIP continues through Future payload upgrades and development shall be competitively sourced or procured via Government Laboratories with Insitu, the prime contractor, performing integration efforts as required.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305234N / *Small (Level 0) Tactical UAS (STUASL0)*	Project (Number/Name) 3192 / *RQ-21 BLACKJACK*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Upgrade Efforts/Correction of Deficiencies	C/BOA	Insitu, Inc : Bingen, WA	10.214	6.017	Mar 2020	5.286	Mar 2021	1.000	Mar 2022	-		1.000	-	-	-
Prior year Prod Devt no longer funded in the FYDP	Various	Various : Various	29.125	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	39.339	6.017		5.286		1.000		-		1.000	-	-	N/A

Remarks

Product development corresponds to R-2A Upgrade Efforts.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Engineering Support	WR	NAWC-WD : China Lake, CA	14.532	1.385	Dec 2019	1.413	Dec 2020	0.293	Dec 2021	-		0.293	-	-	-
Government Engineering Support	WR	Various : Various	14.282	0.865	Dec 2019	0.901	Dec 2020	0.061	Dec 2021	-		0.061	-	-	-
Prior year Support no longer funded in the FYDP	Various	Various : Various	8.482	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	37.296	2.250		2.314		0.354		-		0.354	-	-	N/A

Remarks

Support is included within R-2A Engineering Support.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	Various : Various	3.703	0.408	Jul 2020	0.413	Jul 2021	0.131	Jul 2022	-		0.131	-	-	-
Operational Test & Evaluation	WR	Various : Various	0.347	0.040	Dec 2019	0.047	Dec 2020	0.022	Dec 2021	-		0.022	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305234N / *Small (Level 0) Tactical UAS (STUASL0)*	Project (Number/Name) 3192 / *RQ-21 BLACKJACK*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	4.050	0.448		0.460		0.153		-		0.153	-	-	N/A

Remarks

Test and Evaluation is included within R-2A Engineering Support.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	MIPR	Various : Various	3.372	0.235	Mar 2020	0.240	Mar 2021	0.100	Mar 2022	-		0.100	-	-	-
Program Management Support	C/CPFF	Bowhead : Patuxent River, MD	2.229	0.410	Jan 2020	0.418	Jan 2021	0.125	Jan 2022	-		0.125	-	-	-
Travel	WR	Various : Various	0.497	0.050	Oct 2019	0.055	Oct 2020	0.040	Oct 2021	-		0.040	-	-	-
Prior Year Mgmt Svcs no longer funded in the FYDP	Various	Various : Various	2.349	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	8.447	0.695		0.713		0.265		-		0.265	-	-	N/A

Remarks

Management Services is included within R-2A Engineering Support.

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	89.132	9.410		8.773		1.772		-		1.772	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305234N / *Small (Level 0) Tactical UAS (STUASL0)*	**Project (Number/Name)** 3192 / *RQ-21 BLACKJACK*

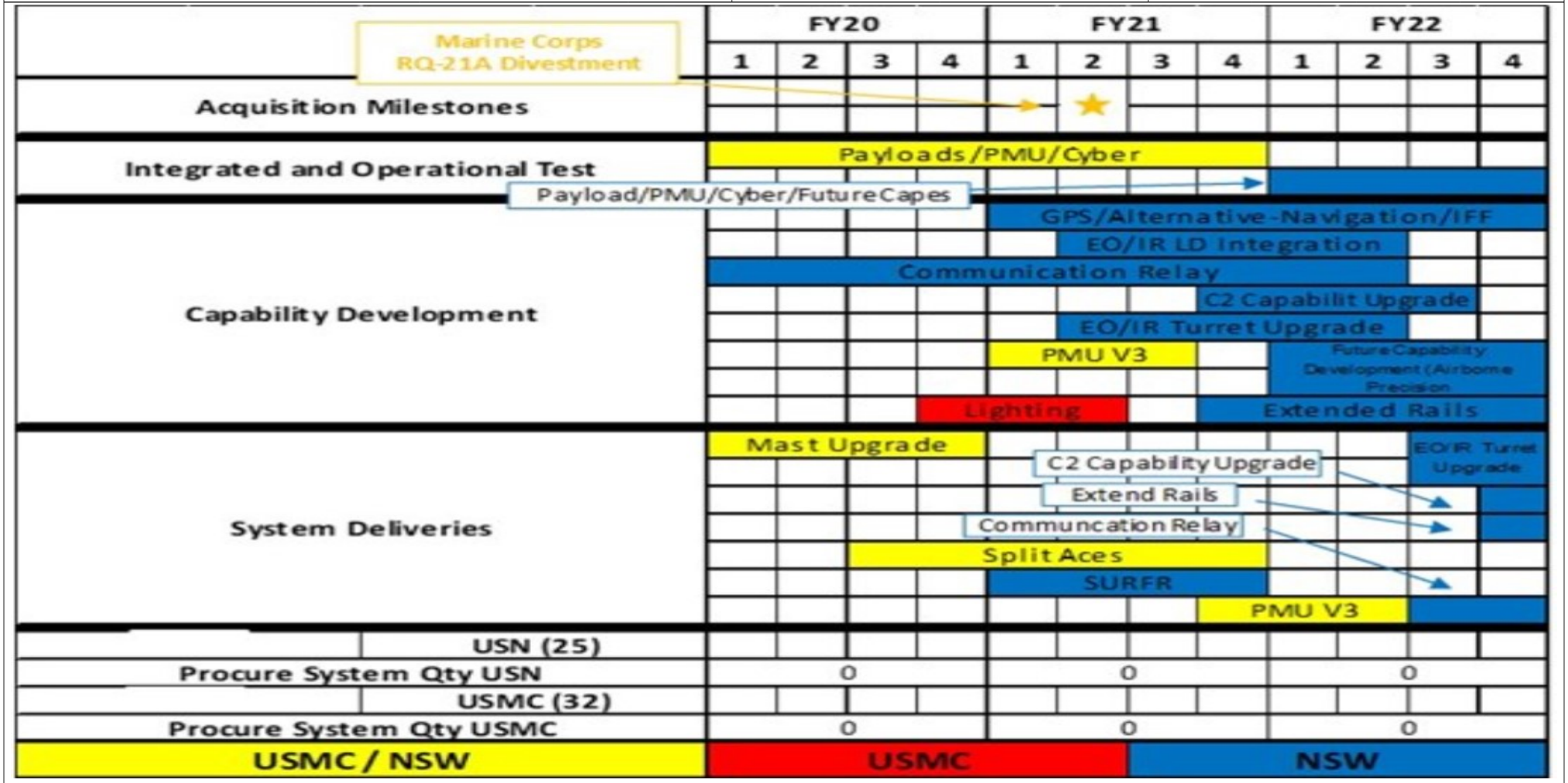

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305234N / *Small (Level 0) Tactical UAS (STUASL0)*	**Project (Number/Name)** 3192 / *RQ-21 BLACKJACK*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
RQ-21A				
Acquisition Milestones: Marine Corps RQ-21A Divestment	2	2021	2	2021
Integrated and Operational Test: Integrated and Operational Test - Payloads (Propulsion Module Unit (PMU), Cybersecurity, SWIR, SW)	1	2020	4	2021
Integrated and Operational Test: Integrated and Operational Test - Payloads (PMU, Cybersecurity, Future Capabilities)	1	2022	4	2022
Capability Development: Communication Relay	1	2020	2	2022
Capability Development: EO/IR Turret Upgrade	2	2021	2	2022
Capability Development: Collision Ligtning	4	2020	2	2021
Capability Development: GPS Anti-Jam	1	2021	4	2022
Capability Development: Extended Rails/Alternative Navigation	4	2021	4	2022
Capability Development: C2 Capability Upgrade	4	2021	3	2022
Capability Development: V3 Propulsion Module Unit (PMU)	1	2021	3	2021
Systems Deliveries: Mast Upgrade	1	2020	4	2020
Systems Deliveries: Split Aces Payloads	3	2020	4	2021
Systems Deliveries: SURFR Payloads	1	2021	4	2021
Systems Deliveries: EO/IR Turret Upgrade	3	2022	4	2022
Systems Deliveries: V3 Propulsion Module Unit (PMU)	4	2021	4	2022
Systems Deliveries: Extended Rails	4	2022	4	2022
Systems Deliveries: C2 Capability Upgrade	4	2022	4	2022