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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Office of the Secretary Of Defense **Date:** February 2020

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)					PE 0604400D8Z I Department of Defense (DoD) Unmanned Systems Common Development							
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	73.769	7.625	7.021	2.787	-	2.787	2.832	2.880	2.943	3.004	Continuing	Continuing
440: UAS Airspace Integration	42.282	4.982	4.984	0.792	-	0.792	0.838	0.876	0.908	0.926	Continuing	Continuing
442: Interoperability	29.672	2.313	1.788	1.646	-	1.646	1.745	1.655	1.679	1.715	Continuing	Continuing
443: Unmanned Systems Roadmap	1.815	0.330	0.249	0.349	-	0.349	0.249	0.349	0.356	0.363	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Department of Defense (DoD) Unmanned Systems (UxS) Common Development program is a joint effort to develop and demonstrate common standards, architectures, and technologies that address unmanned systems' issues across all domains and all Military Services. The intent is to increase interoperability and effectiveness by promoting cooperative development of solutions that are applicable across all unmanned systems. This effort initially focused on addressing DoD unmanned aircraft systems (UAS), to include integration into the National Airspace System (NAS) and a common, interoperable ground station architecture and associated interface standards. While UAS initially was the primary focus, interoperability among all unmanned and manned systems is the long-term goal.

B. Program Change Summary (\$ in Millions)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	7.763	3.021	3.074	0.000	3.074
Current President's Budget	7.625	7.021	2.787	0.000	2.787
Total Adjustments	-0.138	4.000	-0.287	0.000	-0.287
• Congressional General Reductions	-	-	-	-	-
• Congressional Directed Reductions	-	-	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	0.000	4.000	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-	-	-	-	-
• SBIR/STTR Transfer	-0.137	-	-	-	-
• A&S realignment to priority programs for Industrial Policy/Special Programs/GSA	-	-	-0.119	-	-0.119
• Cancelled Acct	-0.001	-	-	-	-
• Economic Assumption	-	-	-0.003	-	-0.003
• Defense Wide Review Adjustment	-	-	-0.165	-	-0.165

Change Summary Explanation

The FY 2021 adjustment of \$0.119 million is an A&S realignment of funds in support of high priority programs in Industrial Policy/Special Programs/GSA.

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604400D8Z / Department of Defense (DoD) Unmanned Systems Common Development	Project (Number/Name) 440 / UAS Airspace Integration
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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
440: UAS Airspace Integration	42.282	4.982	4.984	0.792	-	0.792	0.838	0.876	0.908	0.926	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Airborne Sense-and-Avoid (ABSAA) and Ground Based Sense-and-Avoid (GBSAA) technology development transitioned to UAS programs of record during FY 2013. The focus is on safe and secure integration into the National Airspace, which includes GBSAA, ABSAA, and Unmanned Traffic Management interoperability and standards.

A. Mission Description and Budget Item Justification

Global Hawk and Triton, as well as other Group 3-5 UAS, need a sense-and-avoid (SAA) capability as an alternate means of compliance to Title 14 Code of Federal Regulations, Part 91.111 and Part 91.113, requirement to see and avoid other aircraft. The Air Force is leading the effort to develop an ABSAA system that is suitable to support operations within U.S. and foreign airspace. The RQ-4 Global Hawk, MQ-4C Triton, MQ-1B Predator, MQ-1C Gray Eagle, and MQ-9 Reaper all have a requirement for SAA capability and will leverage the technology being developed by the Air Force. The Army is leading the development of a GBSAA system to provide a solution for improved airspace access in terminal operations as well as operations/training within the GBSAA system's coverage area (e.g., Gray Eagle at Fort Hood and Shadow operations at Cherry Point). This system provides a near-term solution and is an integral part of the long-term permanent solution. Long-term GBSAA systems and Unmanned Traffic Management (UTM) architectures, operating concepts, standards and technology are being developed to allow DoD, commercial, and private manned and Group 1-5 Unmanned Aircraft to operate safely and effectively in the national airspace. The change in airspace procedures, airspace de-confliction, and Traffic Management requires new processes and procedures for safe and secure national airspace access.

This joint funding also supports development of common operating concepts, policy, standards, modeling and simulation, and technology to enable DoD UAS to routinely access the national and international airspace systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2019	FY 2020	FY 2021
Title: Unmanned Aircraft System Airspace Integration Initiatives	4.982	4.984	0.792
Description: Starting in FY 2010, the Department's sense and avoid (SAA) developmental efforts are enhanced by this defense-wide program element. This program has provided joint funding to accelerate the development of SAA technology and standards to enable UAS to routinely access the national and international airspace systems. This program also supports development of UAS airspace integration policy and standards as well as the modeling, simulation, and operational analysis needed to validate the standards. In FY 2013, ABSAA and GBSAA efforts transitioned to the Services.			
FY 2019 Accomplishments:			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
<p>Completed Final Operational Capability at Grand Forks and Beale AFB. Integrated GBSAA at Fargo and March AFB. Completed full testing of UTM Architecture and DoD unmanned Service Supplier System interfaces in coordination with the Department of Homeland Security. Conducted Integration of UTM into DoD Counter UAS Systems. Completed study and formally requested a Remote Identification Rule to the Federal Aviation Administration (FAA).</p> <p>FY 2020 Plans: Develop future policy and architectures that support the operation of DoD, Commercial, and Private Group 1-5 UAS systems in the national Airspace safely by developing an UTM system. Investigate and draft Cyber security concept of operations for Manned and Unmanned Aircraft Systems operating in the National Airspace with a focus on Groups 1-2 UAS. Evaluate and validate identified best-candidate solutions for low size, weight, power and cost technology supporting military small UAS operations in national, international, and foreign national airspace. Develop quantitative safety assessment approaches that support unique UAS operations to support emerging DoD needs and inform future rulemaking. Make formal recommendations for separation minima that enable low-altitude military UAS to remain clear of other aircraft. Continue to engage the FAA to advance DoD UAS airspace integration. Investigate and draft Cyber security concept of operations for Manned and Unmanned Aircraft Systems operating in the national airspace.</p> <p>FY 2021 Plans: Develop policy and architectures that support the operation of DoD and interagency Group 1-5 UAS systems in the national Airspace safely by developing an UTM system and Ground Base Sense and Avoid and Air Base Sense and Avoid architecture. Investigate and draft Cyber security concept of operations for Manned and Unmanned Aircraft Systems operating in the national airspace with a focus on Groups 1-2 UAS by limiting Cyber security vulnerabilities. Evaluate and validate identified best-candidate solutions for low size, weight, power and cost technology supporting military sUAS operations in national, international and foreign national airspace with improved cyber security controls. Develop quantitative safety assessment approaches that support unmanned systems operations to support emerging DoD needs and inform rulemaking with the interagency. Provide formal recommendations for safe separation standards and techniques that enable low-altitude military UAS to remain clear of other aircraft. Continue to engage the FAA to advance DoD UAS and Counter UAS airspace integration. Investigate and draft Cyber security concept of operations for Manned and Unmanned Aircraft Systems operating in the national airspace.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: The decrease in funding from FY 2020 to FY 2021 is due to the Defense Wide Review and other A&S program re-alignments.</p>			
Accomplishments/Planned Programs Subtotals	4.982	4.984	0.792

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

Remarks

D. Acquisition Strategy
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Office of the Secretary Of Defense **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604400D8Z / Department of Defense (DoD) Unmanned Systems Common Development	Project (Number/Name) 440 / UAS Airspace Integration
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
GBSAA	MIPR	USAF A3 AFLCMC/ HBAG (VOLPE/ MITRE) : AFLCMC/ HBAG	34.012	0.480	Jul 2019	0.160		0.041		-		0.041	Continuing	Continuing	-
DoD UTM	MIPR	NASA : Ames Research California	1.135	3.000	Feb 2019	0.387		0.550		-		0.550	Continuing	Continuing	-
National Guard GBSAA	MIPR	Army PM UAS : Army Redstone, Alabama	4.843	1.020	Apr 2019	0.000		-		-		-	Continuing	Continuing	-
DoD UxS adn C-UxS Architecture and Standards	MIPR	USAF/ARMY/ NAVY/NASA : Labs - California, NY, Alabama	-	-		4.000	Jul 2020	0.000		0.000		0.000	Continuing	Continuing	-
Subtotal			39.990	4.500		4.547		0.591		0.000		0.591	Continuing	Continuing	N/A

Remarks
FY20 Congressional Add will support the development of UXS and counter UXS Architecture and development standards

Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
USAF - A3 PBFA Support	Option/ LH	USAF A3 AFLCMC/ HBAG : AFLCMC/ HBAG	2.292	0.482	Mar 2019	0.437		0.201		-		0.201	Continuing	Continuing	-
Subtotal			2.292	0.482		0.437		0.201		-		0.201	Continuing	Continuing	N/A

Remarks
NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Office of the Secretary Of Defense **Date:** February 2020

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	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	42.282	4.982	4.984	0.792	0.000	0.792	Continuing	Continuing	N/A

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Office of the Secretary Of Defense		Date: February 2020
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FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

UAS Airspace Integration	
GBSAA Development and Integration	
Unmanned Traffic Management	
UAS Integration NAS support	

FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

UAS Airspace Integration	
GBSAA Development and Integration	
Unmanned Traffic Management	
UAS Integration NAS support	

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Office of the Secretary Of Defense		Date: February 2020
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>UAS Airspace Integration</i>				
GBSAA Development and Integration	1	2018	4	2022
Unmanned Traffic Management	2	2018	4	2022
UAS Integration NAS support	1	2018	4	2024

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604400D8Z / Department of Defense (DoD) Unmanned Systems Common Development	Project (Number/Name) 442 / Interoperability
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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
442: <i>Interoperability</i>	29.672	2.313	1.788	1.646	-	1.646	1.745	1.655	1.679	1.715	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Interoperability project will develop and demonstrate an interoperable, standards-based, open architecture solution for cross-domain (air, ground, maritime) unmanned systems. The intent is to improve joint and coalition interoperability and promote competition through the implementation of open standards and open architectures.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2019	FY 2020	FY 2021
Title: Interoperability	2.313	1.788	1.646
<p>Description: Develop and demonstrate an interoperable, standards-based, open ground station architecture for cross-domain (air, ground, maritime) unmanned systems; improve joint and coalition interoperability; and promote competition through the implementation of open standards and open architectures.</p> <p>FY 2019 Accomplishments: Completed integration of an autonomous Target recognition system with a Small UAS for tactical intelligence, surveillance, and reconnaissance (ISR) support. Developed the Blue UAS architecture that is being used to support the future small UAS Program of records. Developed the Unmanned System Safety Precepts and draft Guide for integration UxS into the Joint Force Structure. Drafted a type 1 encryption standard for the Joint Communications Architecture for Unmanned Systems to improve long range communications. Established the DoD Counter UAS Senior Integration Group Process. Established a policy for improved airspace operations with the FAA to improve the High Altitude Research Project (HARP) and other critical airspace operations. Developed a Counter UAS Security Classification Guide. Executed policy preventing cyber security vulnerabilities. Drafted a UAS traffic management concept of operations with the Department of Homeland Security (DHS) and FAA for improvement in the National Airspace.</p> <p>FY 2020 Plans:</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
<p>Support the continued development and implementation of the Service Acquisition Executive (SAE) working group for UAS Control Segment Architecture (UCS) interfaces and Joint Architecture Unmanned System (JAUS).</p> <p>Develop a Joint Communications Architecture for Unmanned Systems (JCAUS) and demonstrate a JCAUS compliant prototype to validate and further mature the architecture.</p> <p>Develop Safety standards and policy for Unmanned and Autonomous systems that will allow for the incorporation of Artificial Intelligence (AI).</p> <p>Continue support for Unmanned Systems Interoperability and Integration workshop/technical exchange meeting.</p> <p>Develop Unmanned System autonomous test and evaluation standards and architectures using modeling and simulation.</p> <p>Investigate a Cyber secure solution for integrating Artificial Intelligent systems into Unmanned Systems.</p> <p>Continue support to DoD Interoperability Integrated Product Team (IPT).</p> <p>Develop a UAS Architecture for Small Unmanned Systems.</p> <p>Validate Autonomous Safety Precepts for Unmanned Systems.</p> <p>Improve cybersecurity and communication links of UxS.</p> <p>FY 2021 Plans:</p> <p>Develop a UAS Architecture for Small Unmanned Systems.</p> <p>Validate Autonomous Safety Precepts for Unmanned Systems.</p> <p>Improve cybersecurity and communication links of UxS.</p> <p>Integrate Cyber Security Policies and Standards into UxS Architectures.</p> <p>Develop Acquisition strategies to support federal interagency small UAS architecture.</p> <p>Develop a Joint Communications Architecture for Unmanned systems (JCAUS) and demonstrate a JCAUS compliant prototypes to validate and further mature the architecture.</p> <p>Develop Safety standards and policy for Unmanned and Autonomous systems that will allow for the incorporation of AI.</p> <p>Continue support for Unmanned Systems Interoperability and Integration workshop/technical exchange meeting.</p> <p>Develop and Unmanned system autonomous test and Evaluation standards and architectures using modeling and simulation.</p> <p>Investigate a Cyber secure solution for integrating Artificial Intelligent systems into Unmanned Systems.</p> <p>Maintain the Joint Robotics and Autonomous Solutions Enterprise by maintaining DoD directed Interoperability standards across the service for all robotic and autonomous systems.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement:</p> <p>The decrease in funding from FY 2020 to FY 2021 is due to the Defense Wide Review and other A&S program re-alignments.</p>			
Accomplishments/Planned Programs Subtotals	2.313	1.788	1.646

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Office of the Secretary Of Defense **Date:** February 2020

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

N/A

Remarks

D. Acquisition Strategy

n/a

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Office of the Secretary Of Defense **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604400D8Z / Department of Defense (DoD) Unmanned Systems Common Development	Project (Number/Name) 442 / Interoperability
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
UxS Interoperability and Architecture Development	MIPR	Labs, Warfare Centers, and DoD components and support : DoD Labs, Warfare Center, DoD and support service	29.672	2.313	Sep 2019	1.788	Apr 2020	1.646		-		1.646	Continuing	Continuing	-
Subtotal			29.672	2.313		1.788		1.646		-		1.646	Continuing	Continuing	N/A

Remarks
NA

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	29.672	2.313	1.788	1.646	-	1.646	Continuing	Continuing	N/A

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Office of the Secretary Of Defense		Date: February 2020
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FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

UxS Interoperability and Architecture Development	
Interoperability and Open Architecture	██████████
UxS Safety	██████████
UxS Development	██████████

FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

UxS Interoperability and Architecture Development	
Interoperability and Open Architecture	██
UxS Safety	██
UxS Development	██

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Office of the Secretary Of Defense		Date: February 2020
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604400D8Z / <i>Department of Defense (DoD) Unmanned Systems Common Development</i>	Project (Number/Name) 442 / <i>Interoperability</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>UxS Interoperability and Architecture Development</i>				
Interoperability and Open Architecture	1	2018	4	2024
UxS Safety	2	2018	4	2024
UxS Development	1	2018	4	2024

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Office of the Secretary Of Defense **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604400D8Z / Department of Defense (DoD) Unmanned Systems Common Development	Project (Number/Name) 443 / Unmanned Systems Roadmap
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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
443: Unmanned Systems Roadmap	1.815	0.330	0.249	0.349	-	0.349	0.249	0.349	0.356	0.363	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This effort supports the Department's Unmanned Systems Integrated Roadmap and updates. The roadmap provides a DoD vision for the continuing development, fielding, and employment of unmanned systems technologies; establishes the current state of unmanned systems in today's force; and outlines a strategy to address common challenges to achieve the shared vision across all unmanned domains (air, ground, and maritime).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2019	FY 2020	FY 2021
<p>Title: Unmanned Systems Roadmap</p> <p>Description: Develops, Drafts, and Produces the Department's Unmanned Systems Integrated Roadmap. Maintains policy, standards, and interoperability of Robotic and Autonomous systems across all domains.</p> <p>FY 2019 Accomplishments: Established the Joint Robotics and Autonomous Systems Policy and Guidance Excom to further the interoperability operations. Drafted and Staffed a completed DoD UxS Safety issuance for Robotics and Autonomous Systems. Analyzed the FY 2017 UxS roadmap for improved integration across the services.</p> <p>FY 2020 Plans: Release the FY 2019 Unmanned Systems Integrated Roadmap. Update the Department's Unmanned Systems Integrated Roadmap and perform related studies supporting the Department's vision for unmanned systems. Integrate feedback, responses, and new technology into the FY 2019 Roadmap. Investigate changes to concept of operations with guidance provided by Department's vision for unmanned systems.</p> <p>FY 2021 Plans: Release the FY 2020 Unmanned Systems Integrated Roadmap and establish the Joint Robotics and Autonomous Systems standards, policies, and interoperability requirements. Update the Department's Unmanned Systems Integrated Roadmap and perform related studies supporting the Department's vision for unmanned systems. Integrate feedback, responses, and new technology into the FY 2020 Roadmap.</p>	0.330	0.249	0.349

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Office of the Secretary Of Defense		Date: February 2020
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
Investigate changes to concept of operations with guidance provided by Department's vision for unmanned systems.			
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> The increase in funding between FY 2020 and FY 2021 is in support of the Unmanned Systems roadmap is developed and published every other year to provide the Department's vision for Unmanned Systems based on the rapid change in technology.			
Accomplishments/Planned Programs Subtotals	0.330	0.249	0.349

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

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Office of the Secretary Of Defense **Date:** February 2020

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Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Unmanned Systems Roadmap	C/LH	Army TARDEC Unmanned System Support services : Army TARDEC	1.815	0.330	Aug 2019	0.249		0.349				0.349	Continuing	Continuing	-
Subtotal			1.815	0.330		0.249		0.349			-	0.349	Continuing	Continuing	N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		1.815	0.330	0.249	0.349	-	0.349	Continuing	Continuing	N/A

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Office of the Secretary Of Defense		Date: February 2020
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	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Unmanned Systems Roadmap Development																												
Unmanned Systems Roadmap Development																												

	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Unmanned Systems Roadmap Development																												
Unmanned Systems Roadmap Development																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2021 Office of the Secretary Of Defense		Date: February 2020
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604400D8Z / Department of Defense (DoD) Unmanned Systems Common Development	Project (Number/Name) 443 / Unmanned Systems Roadmap

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Unmanned Systems Roadmap Development				
Unmanned Systems Roadmap Development	2	2018	4	2024