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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305015F / C2 Air Operations Suite - C2 Info Services
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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	-	9.022	0.000	0.000	0.000	0.000	-	-	-	-	-	-
675218: <i>Applications Development</i>	-	5.206	0.000	0.000	0.000	0.000	-	-	-	-	-	-
675220: <i>Unit Level</i>	-	3.816	0.000	0.000	0.000	0.000	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Command and Control (C2) Air Operations Suite - C2 Information Services (C2AOS-C2IS) funds operational development necessary to acquire and modify segments of Air Force's (AF) C2 capabilities and services. Applications Development provides worldwide operational capabilities for AF C2 in support of DoD, Coalition Partners, and other government agencies. These efforts focus on support of the Joint Forces Air Component Commander (JFACC) that provides air, space and cyber support as presented to the AOC and to other AF and Joint Services C2 systems. Applications Development efforts deliver capabilities identified in the Joint Command and Control (JC2) Capability Development Document (CDD) (2013). These activities include C2AOS-C2IS needs identified in the Capability Definition Package (CDP) (2012). This program is part of the overarching Kessel Run portfolio.

Applications Development: C2AOS-C2IS creates web-enabled information services to expose air operations data using standardized schemas, such as those developed by the Air Operations Community of Interest. C2AOS-C2IS also develops and matures net-centric C2 applications for air battle planning, execution, and management functions. These applications include Network Enabled Weapons (NEW); the remainder of the CDP and Theater Battle Management Core Systems - Force Level (TBMCS FL) functionality; services to support air mission and Friendly Order of Battle execution, Alerting, Publish and Subscribe, Content Management and Reporting; and integration with a JC2 Reference Architecture (RA) host infrastructure environment.

Unit Level: Command and Control Incident Management and Emergency Response Application (C2IMERA; formerly Unit Command and Control [UC2]) funds develop and integrate C2IMERA as an evolving sequence of increasing software capabilities that support a wing commander's ability to track base level resources, incident management, and provide a real time Common Operating Picture, enabling a commander to have total situational awareness during peace and wartime operations. C2IMERA operations software systems addresses needs identified in the TBMCS Operational Requirements Document (ORD) (2001), the UC2 Baseline System Requirements Document (SRD), and AF Form 1067, Modification Proposal, requirements documents. C2IMERA is utilizing Agile Software Development and Operations (DevOps) methodology by directly soliciting user feedback for improvements to the software. C2IMERA is fielded to Wing Operations Centers (WOC), the Maintenance Operations Centers (MOC), the Emergency Operations Centers (EOC), Crisis Action Teams (CAT), and many other work-centers across multiple MAJCOMs with plans to expand for use as an AF wide application.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605831F. In FY20 \$2.050M was expended for civilian pay expenses in this program element, and in FY21 \$0.000M is forecasted for civilian pay expenses in this program element.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force	Date: May 2021
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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305015F / C2 Air Operations Suite - C2 Info Services
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This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022 Base</u>	<u>FY 2022 OCO</u>	<u>FY 2022 Total</u>
Previous President's Budget	9.313	0.000	0.000	0.000	0.000
Current President's Budget	9.022	0.000	0.000	0.000	0.000
Total Adjustments	-0.291	0.000	0.000	0.000	0.000
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-0.001	0.000			
• SBIR/STTR Transfer	-0.290	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305015F / C2 Air Operations Suite - C2 Info Services	Project (Number/Name) 675218 / Applications Development
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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
675218: <i>Applications Development</i>	-	5.206	0.000	0.000	0.000	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

This project funds operational development necessary to acquire and modify segments of Air Force's (AF) Command and Control (C2) capabilities and services. Applications Development provides worldwide operational capabilities for AF C2 in support of DoD, Coalition Partners, and other government agencies. These efforts focus on support of the Joint Forces Air Component Commander (JFACC) that provides air, space and cyber support as presented to the AOC and to other AF and Joint Services C2 systems. Applications Development efforts deliver capabilities identified in the Joint Command and Control (JC2) Capability Development Document (CDD) (2013). These activities include C2 Air Operations Suite - C2 Information Services (C2AOS-C2IS) needs identified in the Capability Definition Package (CDP) (2012). C2AOS-C2IS creates web-enabled information services to expose air operations data using standardized schemas, such as those developed by the Air Operations Community of Interest. C2AOS-C2IS also develops and matures net-centric C2 applications for air battle planning, execution, and management functions. These applications include Network Enabled Weapons (NEW); the remainder of the CDP and Theater Battle Management Core Systems - Force Level (TBMCS FL) functionality; services to support air mission and Friendly Order of Battle execution, Alerting, Publish and Subscribe, Content Management and Reporting; and integration with a JC2 Reference Architecture (RA) host infrastructure environment.

No Budget Year FY22 funding requested; FY22 project efforts are detailed in PE 0207438F, Theater Battle Management (TBM) C4I.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605831F. In FY20 \$2.050M was expended for civilian pay expenses in this program element, and in FY21 \$0.000M is forecasted for civilian pay expenses in this program element.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: C2AOS-C2IS Development	5.206	0.000	0.000	0.000	0.000
Description: Conduct C2AOS-C2IS development and integration using FY16 NDAA, Sec 804 rapid prototyping authority. Develop a solution to address joint partner and non-AOC usage of C2AOS-C2IS in the Agile DevOps framework. This program element may include necessary civilian pay expenses required to manage, execute, and deliver Applications Development weapon system capability.					
FY 2021 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305015F / C2 Air Operations Suite - C2 Info Services	Project (Number/Name) 675218 / Applications Development

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	See PE 0207438F, Theater Battle Management (TBM) C4I, Project Number 675218, Applications Development. FY 2022 Base Plans: See PE 0207438F, Theater Battle Management (TBM) C4I, Project Number 675218, Applications Development. FY 2022 OCO Plans: N/A FY 2021 to FY 2022 Increase/Decrease Statement: N/A				
Accomplishments/Planned Programs Subtotals	5.206	0.000	0.000	0.000	0.000

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

N/A

Remarks

D. Acquisition Strategy

The acquisition strategy builds on agile development and modification of existing capabilities using evolutionary acquisition to standardize and modernize C2AOS-C2IS. C2AOS-C2IS modifications continue to operate under FY16 NDAA, Section 804, Middle Tier of Acquisition for Rapid Prototyping and Rapid Fielding leveraging commercial best practices to fully retire TBMCS FL. Funding for this activity in FY21 and FY22 is covered under PE 0207438F, Theater Battle Management (TBM) C4I.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305015F / C2 Air Operations Suite - C2 Info Services	Project (Number/Name) 675218 / Applications Development
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
C2AOS-C2IS Agile Software Development	C/T&M	Various : Multiple	-	3.156	Apr 2020	0.000		0.000		0.000		0.000	-	-	-
Subtotal			-	3.156		0.000		0.000		0.000		0.000	-	-	N/A

Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
C2AOS-C2IS Civilian Direct Cite Authorizations for Product Development	Allot	AFLCMC/FZA : TBD	-	2.050	Feb 2020	0.000		0.000		0.000		0.000	-	-	-
Subtotal			-	2.050		0.000		0.000		0.000		0.000	-	-	N/A

Project Cost Totals	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
	-	5.206	0.000	0.000	0.000	0.000	-	-	N/A

Remarks
C2AOS-C2IS funding transferred to PE 0207438F, Theater Battle Management (TBM) C4I, Project Number 675218, Applications Development.

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305015F / C2 Air Operations Suite - C2 Info Services	Project (Number/Name) 675218 / Applications Development

FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
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

Applications Development	
C2AOS-C2IS Development	

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305015F / C2 Air Operations Suite - C2 Info Services	Project (Number/Name) 675218 / Applications Development

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Applications Development				
C2AOS-C2IS Development	1	2020	4	2020

Note

See PE 0207438F, Theater Battle Management (TBM) C4I, Project Number 675218, Applications Development for continued development events.

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305015F / C2 Air Operations Suite - C2 Info Services	Project (Number/Name) 675220 / Unit Level
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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
675220: Unit Level	-	3.816	0.000	0.000	0.000	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Command and Control Incident Management and Emergency Response Application (C2IMERA; formerly Unit Command and Control [UC2]) funds are used to develop and integrate C2IMERA as an evolving sequence of increasing software capabilities that support a wing commander's ability to track base level resources, incident management, and a real time Common Operating Picture, enabling a commander to have total situational awareness during peace and wartime operations. C2IMERA operations software systems addresses needs identified in the TBMCS Operational Requirements Document (ORD) (2001), the UC2 Baseline System Requirements Document (SRD), and AF Form 1067, Modification Proposal, requirements documents. C2IMERA is utilizing Agile DevOps methodology by directly soliciting user feedback for improvements to the software. C2IMERA is fielded to Wing Operations Centers (WOC), the Maintenance Operations Centers (MOC), the Emergency Operations Centers (EOC), Crisis Action Teams (CAT), and many other work-centers across multiple MAJCOMs with plans to expand for use as an AF wide application.

No Budget Year FY22 funding requested; FY22 project efforts are detailed in PE 0207522F, Airbase Air Defense Systems.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605831F. In FY20 \$0.000M was expended for civilian pay expenses in this program element, and in FY21 \$0.000M is forecasted for civilian pay expenses in this program element.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: UC2/C2IMERA Software Development	3.816	0.000	0.000	0.000	0.000
Description: C2IMERA software development and integration.					
FY 2021 Plans: N/A					
FY 2022 Base Plans: See PE 0207522F, Airbase Air Defense Systems, Project Number 675218, Applications Development.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement:					

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305015F / C2 Air Operations Suite - C2 Info Services	Project (Number/Name) 675220 / Unit Level

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
N/A					
Accomplishments/Planned Programs Subtotals	3.816	0.000	0.000	0.000	0.000

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
• OPAF 03 834520: Theater Battle Mgt C2 System	0.500	0.000	0.000	0.000	0.000	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

Projects will be awarded via a sole-source contract for Agile DevOps development, fielding and support activities. The acquisition and contracting strategies were approved by the Senior Materiel Leader on 20 June 2018.

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
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FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
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

Unit Level	
UC2/C2IMERA Development	

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305015F / C2 Air Operations Suite - C2 Info Services	Project (Number/Name) 675220 / Unit Level

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Unit Level</i>				
UC2/C2IMERA Development	1	2020	4	2020

Note

See PE 0207522F, Airbase Air Defense Systems, Project Number 675218, Applications Development for continued development events.