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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203620F / <i>National Space Defense Center</i>
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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
Total Program Element	-	53.305	2.653	2.687	0.000	2.687	2.751	2.800	0.000	0.000	Continuing	Continuing
670004: <i>OTHER STRATCOM ACTIVITIES</i>	-	53.305	2.653	2.687	0.000	2.687	2.751	2.800	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This \$2.687M FY21 budget request for NSDC in Appropriation Research, Development, Test & Evaluation, Air Force, PE 1203620F, should have been requested in PE 1203620SF, Appropriation Research, Development, Test & Evaluation, Space Force. Funds will be transferred to Space Force in the next year's budget request.

This program will develop, upgrade and field the National Space Defense Center's (NSDC) operational infrastructure integrating mission partner networks, data and other hardware and software solutions into NSDC's technical baseline. Additionally, this program will provide for agile requirement development, and operational and developmental test activities supporting software Development in Operations (DevOps). The NSDC allows the national security space community to effectively respond to potential future space threat events and will have the capability to develop, test, and integrate new space system tactics, techniques and procedures (TTPs) in support of both DoD and Intelligence Community operations.

Space acquisition must respond with speed and agility to emerging adversary threats. Space & Missile Systems Center (SMC) is transforming the organization and implementation of space acquisition to an enterprise approach, maximizing innovation and resiliency, leveraging international, commercial, and mission partnerships, and managing program/project priorities according to an integrated unclassified/classified enterprise space architecture. Expanding the appropriate acquisition authorities and contract mechanisms to deliver capability sooner, SMC will strategically execute experimentation, prototyping, risk reduction, and other efforts to develop new or re-purpose capabilities.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver NSDC capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 1206392F and 1206398F

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.

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B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	55.309	2.653	2.692	0.000	2.692
Current President's Budget	53.305	2.653	2.687	0.000	2.687
Total Adjustments	-2.004	0.000	-0.005	0.000	-0.005
• 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	0.000	0.000			
• SBIR/STTR Transfer	-2.004	0.000			
• Other Adjustments	0.000	0.000	-0.005	0.000	-0.005

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force										Date: February 2020		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 1203620F / <i>National Space Defense Center</i>				Project (Number/Name) 670004 / <i>OTHER STRATCOM ACTIVITIES</i>			
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
670004: <i>OTHER STRATCOM ACTIVITIES</i>	-	53.305	2.653	2.687	0.000	2.687	2.751	2.800	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program develops Battle Management and Command and Control (BMC2) applications for the Joint Task Force - Space Defense (JTF-SD)(component for the National Space Defense Center (NSDC)). This includes developing hardware and software prototypes to support JNET developed with the US Strategic Command Joint Emergent Operational Need (ST-0006) and will continue to contribute towards developing hardware and software for an Accelerated BMC2 capability. The JTF-SD (and NSDC) allows the national security space community to effectively respond to potential future space threat events and will have the capability to develop, test, and integrate new space system tactics, techniques and procedures (TTPs) in support of both DoD and Intelligence Community operations.

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

	FY 2019	FY 2020	FY 2021
Title: Application Development	53.305	2.653	2.687
Description: Develop and field Space Battle Management Command and Control capabilities.			
FY 2020 Plans: FY2020 Plans: Continue to analyze and assess mission partner and Intelligence Community networks and achieve authorization to connect to NSDC infrastructure. Partner with test agency to perform developmental and operational test activities to support agile DevOps environment. Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, experimentation, prototyping, etc.			
FY 2021 Plans: FY2021 Plans: Complete Spiral 2 development. Continue to analyze and assess mission partner and Intelligence Community networks and achieve authorization to connect to JTF-SD infrastructure. Partner with test agency to perform developmental and operational test activities and shadow operations for agile DevOps environment. Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, experimentation, prototyping, etc.			
FY 2020 to FY 2021 Increase/Decrease Statement: FY 2021 increased compared to FY 2020. Justification for this increase is described in the plans above.			
Accomplishments/Planned Programs Subtotals	53.305	2.653	2.687

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

N/A

Remarks

D. Acquisition Strategy

NSDC plans to provide funds to other AF/DoD organizations to execute on their contracts. Additionally NSDC will initiate and utilize commercial consortiums to develop capabilities.

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203620F / <i>National Space Defense Center</i>	Project (Number/Name) 670004 / <i>OTHER STRATCOM ACTIVITIES</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>NSDC INFRASTRUCTURE</i>				
SUSTAINMENT/SUPPORT	2	2019	4	2023
<i>BMC2 APPLICATION DEVELOPMENT</i>				
SPIRAL 2 APPLICATION DEVELOPMENT	4	2019	4	2023
<i>SHADOW OPERATIONS CENTER</i>				
SHADOW OPERATIONS CENTER IOC	3	2019	3	2019
SHADOW OPERATIONS APPS	3	2019	2	2021