Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Threat Reduction Agency	Date: March 2019
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0604134BR *I Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*

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	144.934	169.638	0.000	113.590	113.590	69.950	119.522	115.843	117.485	Continuing	Continuing
JC: *Enable Rapid Capability Delivery*	0.000	117.640	148.772	0.000	103.793	103.793	59.860	109.236	105.258	106.598	Continuing	Continuing
JR: *Enable DoD Responsiveness*	0.000	9.790	7.725	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.515
JS: *Assist Situational Understanding*	0.000	17.504	13.141	0.000	9.797	9.797	10.090	10.286	10.585	10.887	Continuing	Continuing

Note

Overseas Contingency Operations (OCO) for Enduring Requirements ($113.590): OCO for Enduring Requirements are enduring in-theater and in-CONUS costs that will likely remain after combat operations cease, and have previously been funded in OCO. Funds also enable and provide for urgent and emergent warfighter requirements from CCMDs and Warfighter Senior Integration Group.

A. Mission Description and Budget Item Justification

The Counter Improvised-Threat (C-IT) Technology Demonstration, Prototype Development, and Testing program element supports the development, demonstration, and testing of improvised threat defeat technologies to advance the JIDO analytical infrastructure, methods, and tools (JS) and enhance counter IED and counter small unmanned aerial system (JC) solutions. Advancements in advanced analytics include the continued production of custom software tools that leverage constantly-evolving machine learning and artificial intelligence algorithms and methods increasing our ability to more quickly develop threat facilitation network connections and activities for the CCMDs. Driven by the current threat still facing deployed US forces, this investment also enables rapid development and delivery of capabilities that more-fully enable the identification, detection, prevention, neutralization, exploitation, and risk mitigation of IEDs, threat-small UASs, and their effects. This also includes test and evaluation facilities and capabilities.

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Threat Reduction Agency	Date: March 2019
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0604134BR *I Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*

B. Program Change Summary ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	0.000	255.661	12.743	0.000	12.743
Current President's Budget	144.934	169.638	0.000	113.590	113.590
Total Adjustments	144.934	-86.023	-12.743	113.590	100.847
• Congressional General Reductions	-	-89.523			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	3.500			
• Congressional Directed Transfers	144.934	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Realignments	-	-	-12.743	113.590	100.847

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2018	FY 2019
Project: JC: *Enable Rapid Capability Delivery*		
Congressional Add: *Hyperspectral Improvised Explosive Device (IED) Detection*	0.000	3.500
Congressional Add Subtotals for Project: JC	0.000	3.500
Congressional Add Totals for all Projects	0.000	3.500

Change Summary Explanation

The change in FY 2020 is due to the continuation of Overseas Contingency Operations (OCO) at a lower level of funding than in FY 2019. The FY2020 OCO Request is for prioritized threat focused areas: Attack the Network, Home-made Explosives, (HME), Vehicle Borne IEDs (VBIED), and Buried IEDs. These will focus capability delivery to meet current warfighter requirements and the evolving threat where they are deployed. Investments in JS: Assist Situation Understanding are for Counter Threat Networks including early action to defeat their pathways and prevent adversaries from acquiring or enhancing their improvised threat capabilities.

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	Project (Number/Name) JC / *Enable Rapid Capability Delivery*	

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
JC: *Enable Rapid Capability Delivery*	0.000	117.640	148.772	0.000	103.793	103.793	59.860	109.236	105.258	106.598	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project harnesses an in-depth understanding of the threat, leading to identification and validation of urgent or emergent counter-threat requirements and Combatant Command capability gaps. In turn, DTRA rapidly provides Counter-Improvised Explosive Device/Counter-small Unmanned Aerial Systems (C-IED/C-sUAS) and counter improvised threat (C-IT) solutions to prevent or mitigate battlefield operational surprise. DTRA's continuous embedded presence with deployed US Joint Forces and coordination with Service components enables full transparency of investment activities and provides for the early identification and understanding of C-IED and C-IT risks and vulnerabilities which enable the timely validation, development, and delivery of counter-threat material and non-material solutions.

DTRA delivers counter-threat materiel solutions in support of US Joint Forces, effectively addressing changes to threat tactics, techniques, and procedures (TTPs) affecting deployed forces. Capability incorporates an embedded tactical presence to understand a continuously evolving threat environment as well as complete visibility of the current DoD counter-threat portfolio to enable rapid response to warfighter vulnerabilities and to enhance force protection and maneuverability. DTRA responds to the following improvised threats: Anti-Armor IED (AAIED), Booby Trapped Structures (BTS), Buried IED, Home-Made Explosives (HME), Personnel-Borne IED (PBIED), Radio Controlled IED (RCIED), improvised threats within tunnels, Vehicle-Attached IED (VAIED), Vehicle-Borne IED (VBIED), Water-Borne IED (WBIED), C-sUAS and emerging threats that are identified by the forward deployed warfighter and technology outreach team.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: JC: Enable Rapid Capability Delivery	117.640	145.272	0.000	103.793	103.793
Description: This project delivers counter-threat materiel solutions in support of US Joint Forces supporting contingency operations, effectively addressing changes to threat tactics, techniques, and procedures (TTPs) affecting deployed forces. ***FY 2019 Plans:*** - Conduct and participate in test and evaluation events in support of improvised threats. - Develop and test C-IED/C-sUAS systems for compatibility prior to systems deploying to operational theaters in support of the warfighter. - Maintain production platforms that support the development and fielding of capabilities that combat improvised threats and the threat network.					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
- Improve deployable forensic field kits to provide near real time feedback and reduce the reach back support requirement. - Conduct modeling and simulation in support of countering improvised threats - Continue threat device characterization, prototyping and production. ***FY 2020 Base Plans:*** N/A ***FY 2020 OCO Plans:*** - Increase Positive Detection (PD) and acceptable False Alarm Rate (FAR) with multiple integrated sensors in Latest Time of Value (LTOV) in support of Standoff Detection of improvised threats (PBIED & VBIED). - Improve size, weight, power and integration of sensors to small unmanned systems. - Improve on-board vs. off-board data processing to provide real time data in unmanned systems to support real time improvised threat detection. - Identify and develop portable technology to look through walls and identify hazards with fidelity in real-time for BTS. - Conduct proof of concept for unmanned vehicle that can autonomously operate within confined spaces and provide necessary imagery to operator for BTS. - Integrate sensors to detect various anomalies in unstructured environment with the ability to detect through clothes and report in real-time at safe standoff distances in support of PBIED. - Improve/develop detection and defeating sUAS (RCMA) capabilities against future technology, including acoustic detection at range, machine learning of constantly changing threat signatures (acoustic, RF signal, radar cross-section, optics, Unattended Radiated Emissions (URE), etc.). - Develop anti-armor detection and defeat capabilities, to include real-time reporting from sensors on mounted vehicles that can detect roadside threats in high clutter, while operating at tactical speed, with high Positive Detection and acceptable False Alarm Rate. - Improve mounted detection of buried IEDs through real-time reporting from sensors on mounted vehicles that can detect buried threats at depths while conducting maneuver operations at speed with high Positive Detection and acceptable False Alarm Rate. Hardware improvements enable faster sensing and software improvements enable faster systems-of-systems reporting (higher Positive Detection and lower False Alarm Rate). - Develop Machine Learning for counter improvised threat technologies and solutions to increase effectiveness of developed/developing capabilities. This would enhance the effectiveness of solutions such as sensors' ability to identify signatures, rapid identification, and detection of IED threats.					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
- Increase Artificial Intelligence of sensors to better sort through an enormous quantity of data, illuminating the relevant actionable information and accelerating the decision making process, often autonomously. Machine learning coupled with artificial intelligence dramatically enhances the effectiveness of systems and our warfighting capabilities. - Finalize production of the Hyper Spectral Imaging Sensor form factor so that it can be utilized on C-sUAS platforms. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** The decrease from FY 2019 to FY 2020 is due to decreased investment in RDT&E technology enablers and technologies to respond to improvised threats such as booby trapped structures, buried IED, person born IED, and water born IED.					
Accomplishments/Planned Programs Subtotals	117.640	145.272	0.000	103.793	103.793

	FY 2018	FY 2019
Congressional Add: Hyperspectral Improvised Explosive Device (IED) Detection	0.000	3.500
FY 2018 Accomplishments: N/A		
FY 2019 Plans: - Began technology development for a small Size, Weight, and Power (SWAP) Hyperspectral Airborne Sensor designed to integrate on a Group 3 Unmanned Air Vehicle (UAV) platform in order to detect Targets of Interest. The Hyperspectral Sensor will be full spectrum which is defined as capable of detecting targets within the Visible and Near-Infrared (VNIR), Short Wave Infra-Red (SWIR), and Long Wave Infra-Red (LWIR) spectrums.		
Congressional Adds Subtotals	0.000	3.500

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• 10/0602134BR/JC: *Improvised Threat Reduction Applied Research*	0.000	0.000	0.000	0.502	0.502	0.512	0.522	0.533	0.543	Continuing	Continuing
• 27/0603134BR/JC: *Counter Improvised-Threat Simulation*	23.366	13.648	0.000	49.528	49.528	50.110	50.250	47.887	48.194	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*

C. Other Program Funding Summary ($ in Millions)

Line Item	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

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes research developers across DoD and other Government agency laboratories, academia, and industry.

E. Performance Metrics

Percentage of completed Counter Improvised-Threat Technology demonstration programs transitioning to warfighter or Services each year.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Threat Reduction Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	Project (Number/Name) JC / *Enable Rapid Capability Delivery*	

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
Anti-Armor IED (AAIED)	C/FFP	Battelle : Idaho Falls, ID	-	-		7.000	Apr 2019	0.000		7.052	Nov 2019	7.052	Continuing	Continuing	-
Booby Trapped Structures (BTS)	C/FFP	Shield AI : San Diego, CA	-	3.420	May 2018	9.350	May 2019	0.000		4.251	May 2020	4.251	Continuing	Continuing	-
Buried IED	C/CPFF	Naval Research Lab : Washington, DC	-	-		5.500	Feb 2019	0.000		2.299	Nov 2019	2.299	Continuing	Continuing	-
Home-Made Explosives (HME)	C/CPFF	Manufacturing Techniques, Inc. (MTEQ) HQ : Lorton, VA	-	17.956	Mar 2018	4.801	Mar 2019	0.000		5.002	Mar 2020	5.002	Continuing	Continuing	-
Network	C/FFP	John Hopkins : Baltimore, MD	-	16.121	Apr 2018	15.689	Apr 2019	0.000		12.875	Apr 2020	12.875	Continuing	Continuing	-
Person-Born IED (PBIED)	C/FFP	MIT Lincoln Laboratory (MIT-LL) : Lexington, MA	-	4.000	May 2018	8.400	May 2019	0.000		5.752	May 2020	5.752	Continuing	Continuing	-
Radio Controlled IED (RCIED)	C/CPFF	Rampart Technologies, Colorado Springs, CO : Sericore, Hanover, MD	-	-		-		0.000		0.500	Nov 2019	0.500	Continuing	Continuing	-
RDT&E Technology Enablers	C/CPFF	Various : Various	-	18.663	Jan 2018	37.861	Jan 2019	0.000		12.662	Jan 2020	12.662	Continuing	Continuing	-
Sensitive Integration Office Programs	C/CPFF	Various : Various	-	15.551	Jun 2018	15.000	May 2019	0.000		10.000	Nov 2019	10.000	Continuing	Continuing	-
Tunnel	C/FFP	ERDC: Vicksburg, MS : MIT Lincoln Labs: Boston, MA	-	5.250	Mar 2018	7.000	Mar 2019	0.000		0.000	Mar 2020	0.000	Continuing	Continuing	-
Unmanned Aerial Systems (UAS)	C/FFP	Technology Service Corporation (TSC) Fairfax, VA : BAE Systems, Fridley, MN	-	10.223	May 2018	5.950	May 2019	0.000		17.005	May 2020	17.005	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Threat Reduction Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	Project (Number/Name) JC / *Enable Rapid Capability Delivery*	

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
Vehicle-Attached IED (VAIED)	C/CPFF	Various : TBD	-	-		1.300	Apr 2019	0.000		0.000		0.000	Continuing	Continuing	-
Vehicle-Borne IED (VBIED)	C/CPFF	Naval Surface Warfare Center (NSWC) Dahlgren : King George County, VA	-	7.500	May 2018	10.500	May 2019	0.000		5.249	May 2020	5.249	Continuing	Continuing	-
Water-Borne IED (WBIED)	C/FFP	Various : Various	-	0.954	Aug 2018	2.000	Aug 2019	0.000		0.000	Aug 2020	0.000	Continuing	Continuing	-
		Subtotal	-	99.638		130.351		0.000		82.647		82.647	Continuing	Continuing	N/A

Test and Evaluation ($ 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
Test and Evaluation	MIPR	Naval Air Weapons Station : China Lake, CA	-	11.485	Apr 2018	12.316	Dec 2018	0.000		13.637	Dec 2019	13.637	Continuing	Continuing	-
T&E Threat Support	MIPR	Intelligence and Information Warfare Directorate (I2WD), Communications-Electronics Research, Development and Engineering Center (CERDEC) : Aberdeen Proving Ground, MD	-	5.275	Apr 2018	6.105	Dec 2018	0.000		7.509	Dec 2019	7.509	Continuing	Continuing	-
SETA Capability Research Architecture Cell (CRAC)	C/CPAF	Zel Technologies : Reston, VA	-	1.242	Sep 2018	0.000		0.000		0.000		0.000	0.000	1.242	1.242
		Subtotal	-	18.002		18.421		0.000		21.146		21.146	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Threat Reduction Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	Project (Number/Name) JC / *Enable Rapid Capability Delivery*	

	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	-	117.640		148.772		0.000		103.793		103.793	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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
Anti-Armor IED (AAIED)																												
Explosive Form Projectile (EFP) Detect - High Resolution Electro-Optical Infrared Camera (HREIOR)																												
Explosive Form Projectile (EFP) Detect - Stalker																												
Explosive Form Projectile (EFP) Detect Spiral																												
Non-Linear Junction Tech																												
EFP Detection & Defeat																												
Booby Trapped Structures (BTS)																												
Iron Horse																												
Buried IED																												
Microwave Frequency Oscillator (MFO) - Mineroller																												
Spectral Polarmetric Instrument Data Analysis (SPIDA)																												
SPIDA Spiral (Automated Change Detection)																												
Home-Made Explosives (HME)																												
Mini Hyper Spectral Imaging Group 3																												
SPINS (Standoff Portable Isotopic Neutron Spectroscopy)																												
Improvised Threat Device Replication																												
T&E Threat Support																												
Network																												
Cobalt Doom																												

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*

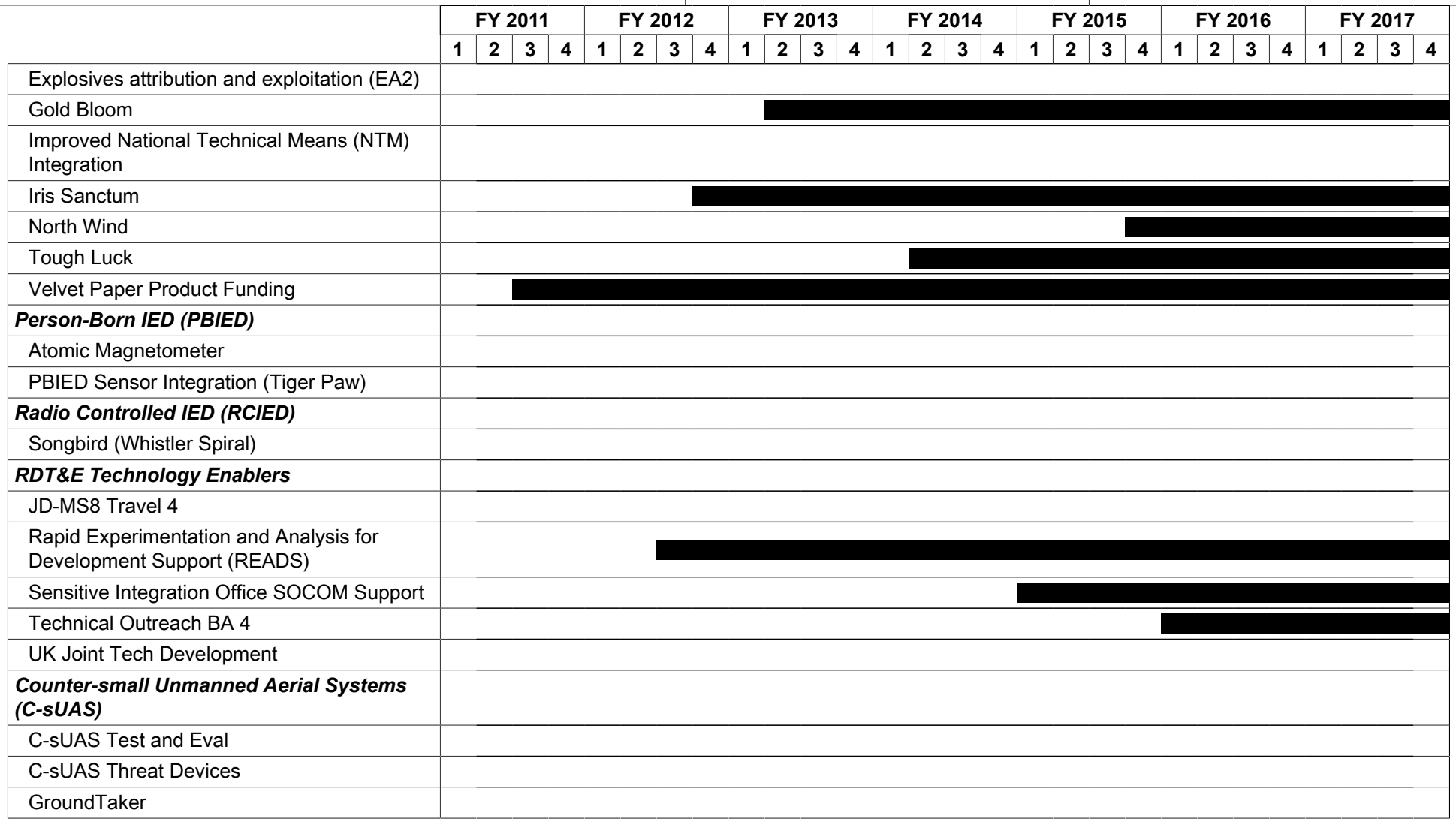
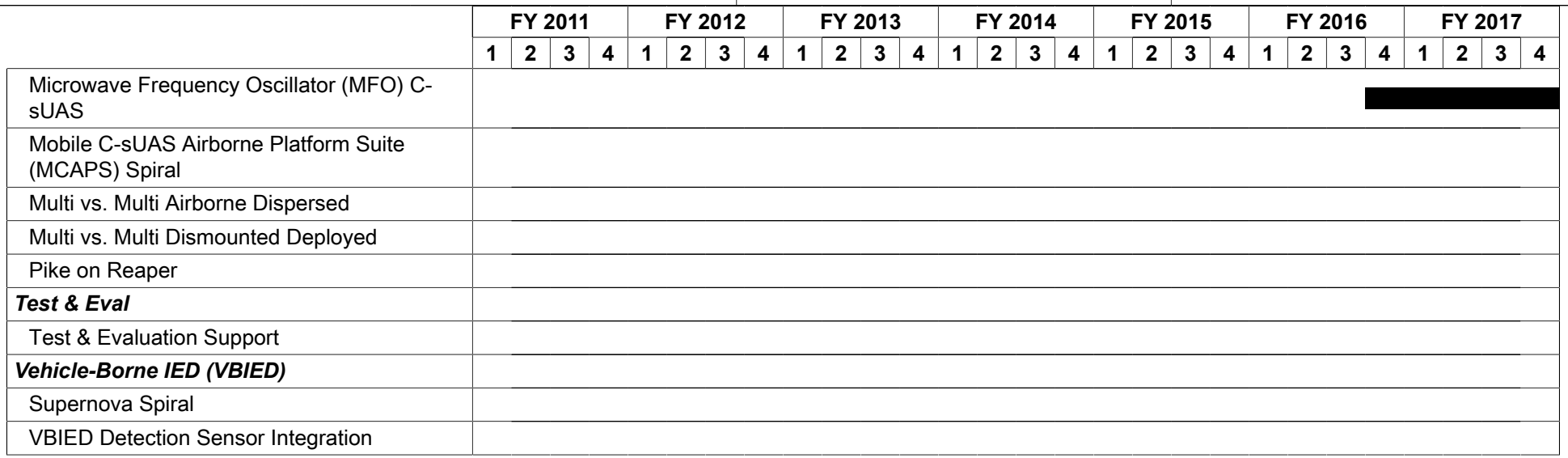


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*



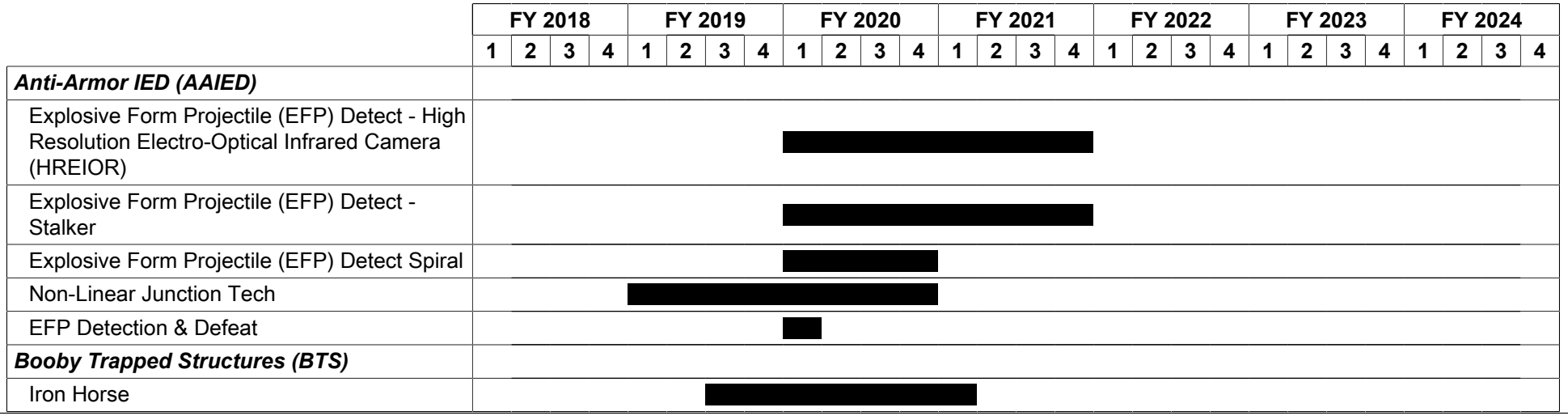


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*

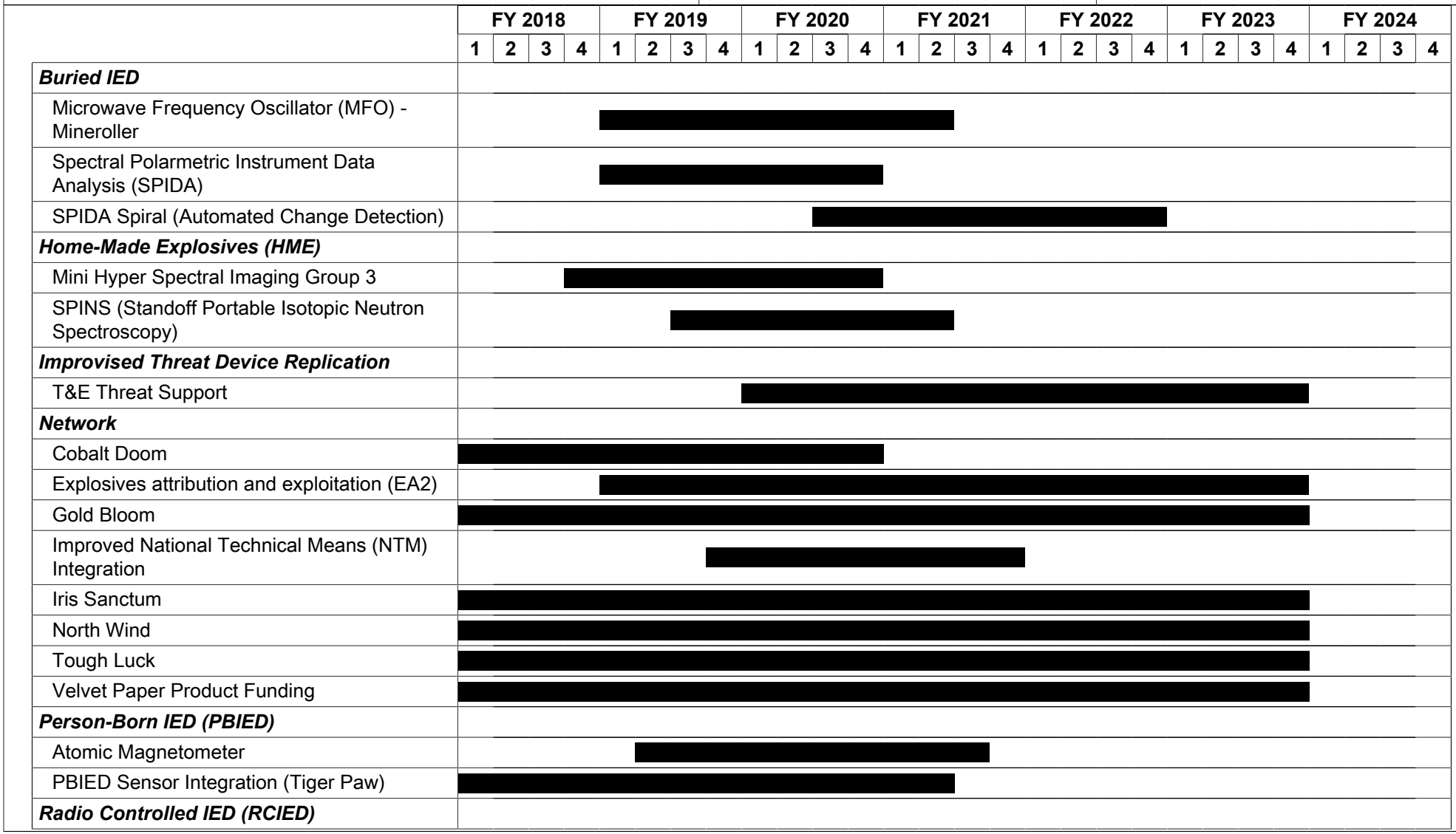


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*

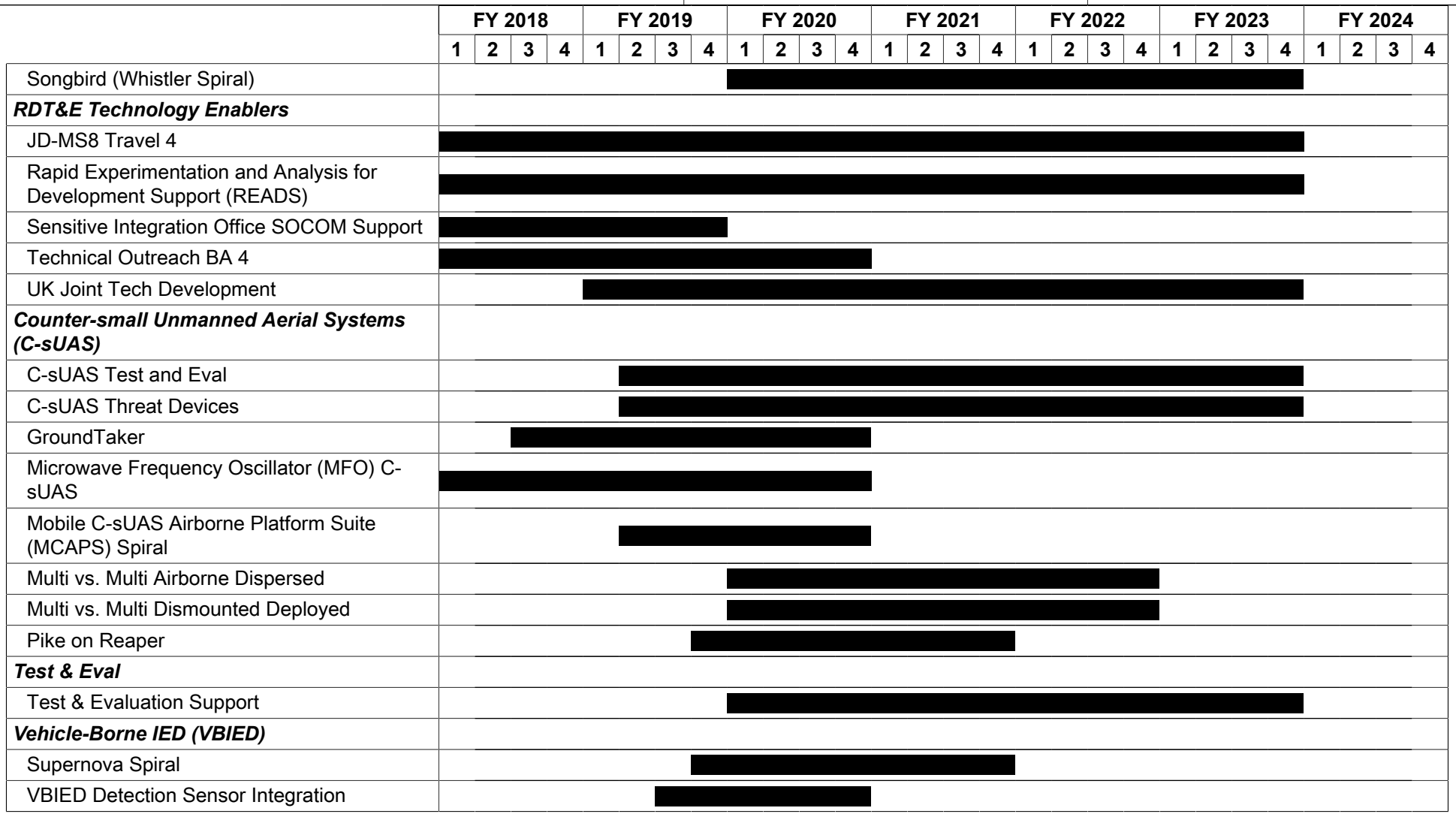


Exhibit R-4A, RDT&E Schedule Details: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Anti-Armor IED (AAIED)				
Explosive Form Projectile (EFP) Detect - High Resolution Electro-Optical Infrared Camera (HREIOR)	1	2020	4	2021
Explosive Form Projectile (EFP) Detect - Stalker	1	2020	4	2021
Explosive Form Projectile (EFP) Detect Spiral	1	2020	4	2020
Non-Linear Junction Tech	1	2019	4	2020
EFP Detection & Defeat	1	2020	1	2020
Booby Trapped Structures (BTS)				
Iron Horse	3	2019	1	2021
Buried IED				
Microwave Frequency Oscillator (MFO) - Mineroller	1	2019	2	2021
Spectral Polarmetric Instrument Data Analysis (SPIDA)	1	2019	4	2020
SPIDA Spiral (Automated Change Detection)	3	2020	4	2022
Home-Made Explosives (HME)				
Mini Hyper Spectral Imaging Group 3	4	2018	4	2020
SPINS (Standoff Portable Isotopic Neutron Spectroscopy)	3	2019	2	2021
Improvised Threat Device Replication				
T&E Threat Support	1	2020	4	2023
Network				
Cobalt Doom	1	2018	4	2020
Explosives attribution and exploitation (EA2)	1	2019	4	2023
Gold Bloom	2	2013	4	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Improved National Technical Means (NTM) Integration	4	2019	4	2021
Iris Sanctum	4	2012	4	2023
North Wind	4	2015	4	2023
Tough Luck	2	2014	4	2023
Velvet Paper Product Funding	3	2011	4	2023
Person-Born IED (PBIED)				
Atomic Magnetometer	2	2019	3	2021
PBIED Sensor Integration (Tiger Paw)	1	2018	2	2021
Radio Controlled IED (RCIED)				
Songbird (Whistler Spiral)	1	2020	4	2023
RDT&E Technology Enablers				
JD-MS8 Travel 4	1	2018	4	2023
Rapid Experimentation and Analysis for Development Support (READS)	3	2012	4	2023
Sensitive Integration Office SOCOM Support	1	2015	4	2019
Technical Outreach BA 4	1	2016	4	2020
UK Joint Tech Development	1	2019	4	2023
Counter-small Unmanned Aerial Systems (C-sUAS)				
C-sUAS Test and Eval	2	2019	4	2023
C-sUAS Threat Devices	2	2019	4	2023
GroundTaker	3	2018	4	2020
Microwave Frequency Oscillator (MFO) C-sUAS	4	2016	4	2020
Mobile C-sUAS Airborne Platform Suite (MCAPS) Spiral	2	2019	4	2020
Multi vs. Multi Airborne Dispersed	1	2020	4	2022
Multi vs. Multi Dismounted Deployed	1	2020	4	2022
Pike on Reaper	4	2019	4	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JC / *Enable Rapid Capability Delivery*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test & Eval				
Test & Evaluation Support	1	2020	4	2023
Vehicle-Borne IED (VBIED)				
Supernova Spiral	4	2019	4	2021
VBIED Detection Sensor Integration	3	2019	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	Project (Number/Name) JR / *Enable DoD Responsiveness*	

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
JR: *Enable DoD Responsiveness*	0.000	9.790	7.725	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.515
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project enhances US Joint Forces' responsiveness to improvised weapons. DTRA builds counter-threat solutions in full collaboration with its partners. Through a robust communities of action approach, DTRA coordinates with the Combatant Commanders (CCDRs), the Joint Staff, the Military Departments/Services, the interagency, coalition partners, industry, and academia to develop Counter-Improvised Explosive Device (C-IED) and Counter Improvised-Threat (C-IT) solutions that further enable the maneuverability and force protection of deployed US Joint Forces. This methodology leverages the authorities, access, and capabilities of the entire US Government and its partners as counter-improvised threat solutions are developed and realized.

DTRA responds to the following improvised threats: Home-Made Explosives (HME), Vehicle-Borne IED (VBIED), Counter- small Unmanned Aerial Systems (C-sUAS) Vehicle-Attached IED (VAIED), Anti-Armor IED (AIED) Buried IED, Radio Controlled IED (RCIED), Personnel-Borne IED (PBIED), Booby Trapped Structures (BTS), Improvised WMD, Water-Borne IED (WBIED), improvised threats within tunnels, and emerging threats that are identified by the warfighter deployed forward.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: JR: Enable DoD Responsiveness	9.790	7.725	-	-	-
FY 2019 Plans: N/A					
FY 2019 to FY 2020 Increase/Decrease Statement: The decrease from FY 2019 to FY 2020 is due to the realignment of activities in Project JR-Enable DoD Responsiveness to Project JC-Enable Rapid Capability Delivery to better support advanced technology development to meet emerging improvised threats.					
Accomplishments/Planned Programs Subtotals	9.790	7.725	-	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JR / *Enable DoD Responsiveness*

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes research developers across DoD and other Government agency laboratories, academia, and industry.

E. Performance Metrics

Percentage of completed Counter Improvised-Threat Technology demonstration programs transitioning to Warfighter each year.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Threat Reduction Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	Project (Number/Name) JR / *Enable DoD Responsiveness*	

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
RDT&E Technology Enablers	C/CPFF	Various : Various	-	9.657	Jan 2018	7.570	Jan 2019	-		-		-	0.000	17.227	17.227
		Subtotal	-	9.657		7.570		-		-		-	0.000	17.227	N/A

Test and Evaluation ($ 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
Test and Evaluation	MIPR	Naval Air Weapons Station : China Lake, CA	-	0.133	Jun 2018	0.155	Jan 2019	-		-		-	Continuing	Continuing	-
		Subtotal	-	0.133		0.155		-		-		-	Continuing	Continuing	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	-	9.790		7.725		-		-		-	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JR / *Enable DoD Responsiveness*

	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	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
N/A					[redacted]																							

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JR / *Enable DoD Responsiveness*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
N/A	1	2019	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	Project (Number/Name) JS / *Assist Situational Understanding*	

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
JS: *Assist Situational Understanding*	0.000	17.504	13.141	0.000	9.797	9.797	10.090	10.286	10.585	10.887	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project enables DTRA to design, develop, test, and deliver IT capabilities that support the ability to understand and analyze global threat information. The project allows DTRA to rapidly develop, test and engineer analytical products, threat models and simulations, data science methodologies, software applications, and to integrate intelligence data sources that enable the rapid collection, fusion, and dissemination of operational-intelligence and technology in order to enable the defeat of threat networks that employ disruptive technologies.

The advanced Mission Information Technology (MIT) capability, its software Systems Integration Lab (SIL), and embedded Combatant Command (CCMD)-direct support and reach back staff, continuously create capabilities to ingest, fuse, analyze, and present mission relevant data and information that provides immediate assistance to DoD and the whole of government. This capability, called Catapult, is a fully accredited SIPR and JWICS based analytical cloud architecture. The Catapult architecture pulls from over more than 850 Secret Internet Protocol Router Network (SIPR) and more than 170 Joint Worldwide Intelligence Communications System (JWICS) data sources and allows for simple and open data access, system stability, scalability, and advanced analytics. In addition to Catapult, the MIT created another significant capability called Voltron. Voltron provides analysts access to signals intelligence (SIGINT) data within a secure and IC-accredited software developer environment. Voltron, give analysts access to continuously new models in support of “Attack the Network” analysis and operations. Voltron provides analysts access to methodologies involving multi-INT fusion in an easy to use interface. These methods are based on years of experience supporting tactical targeting environment and built in collaboration with other teams across the Intelligence Community. There are currently more than 75 models in Voltron available to the user community.

DTRA's authorities and mission have enabled a unique “Path-to-Production” (PTP) for mission-driven IT solutions. This unique development environment includes an integrated Cyber Security Assessment and Authorization (A&A) process, an in-house collateral Authorizing Official (AO), a strong partnership between technologists and intelligence analysts working real-world problems, and a collaborative and innovative culture that launches practical software solutions rapidly.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: JS: Assist Situational Understanding	17.504	13.141	0.000	9.797	9.797
Description: This project enables DTRA to design, develop, test, and deliver IT capabilities that support the ability to understand and analyze global threat information. The project allows DTRA to rapidly develop analytical products, threat models and simulations, data science methodologies, software applications, and to integrate					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JS / *Assist Situational Understanding*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
intelligence data sources that enable the rapid collection, fusion, and dissemination of operational-intelligence and technology in order to enable the defeat of threat networks that employ disruptive technologies. ***FY 2019 Plans:*** - Effort to consolidate Web Visualizations for DTRA Improvised Explosive Device/small Unmanned Aerial Systems (IED/sUAS) data. This will include the Common Intelligence Picture/Common Operational Picture and technical data and will serve as the platform for creation of Counter-IED/Counter-sUAS (C-IED/C-sUAS) analytics. - Build a data science enabled module that will crawl through Catapult reporting and identify reports related to IED/sUAS events. Through machine learning techniques and application of training data, the team will train this module to identify reports that normal queries may miss. These reports will serve as the base data set for the CIED/ C-sUAS event table. - Prepare a list of vetted IED/sUAS events pulled from Catapult reporting. Events will be broken down into relevant categories with associated attributes. - Stand up a database of technical data associated with known IED/sUAS. Library will be available for direct query and incorporated into other C-IED/C-sUAS capabilities. - Integrate Virtual Management System processes and capabilities to build 3D models for various maritime vessels requested by external Special Operations Forces (SOF) customer. - Develop and test a software mapping tool and spatial data analytics technology web service capable of a providing user functionality to create basic geospatial analytic outputs (i.e., line of sight, route vulnerability, etc.). - Generate additional Data Science tables populated with entities extracted from Catapult using RipIt regex trees. This will provide a “truth set” for future Natural Language Processing. - Develop and Test new tools allowing for the visualizing (and effects) of underwater explosions. - Develop a new application (Thor) as a “rules-based” approach to existing Avengers/Phoenix models. Thor is planned to enhance sensitive site exploitation (SSE) data with a tool will provide comprehensive approach to SSE vetting. - Develop capability to visualize and derive trends for Air and Marine Operations Center non-commercial flight data. - Develop and test an Interactive interface which will provide access to the Avenger tool suite on selective networks. - Scope and Design the Data Science software and tool development environment as to create containerized					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JS / *Assist Situational Understanding*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
tools which will provide a standard working image across the multiple networks. - Provide a methodology leveraging contextual clues from reporting, to provide additional information about individual person entities extracted from reports. (e.g., job title). - Develop and Test custom webpages that will provide “pre-vetted” data against analyst problem set. Automated workflow built for specific customer needs. - Develop and test a web-based Horizon version to act as a location intelligence discovery tool. The tool will provide geospatial querying within 2D maps to users as a light weight alternative to the smart-client version. - Develop and test a web-based Cognitive Counter-Improvised Explosive Device Signature System (C2IS2) tool that will provide OP/INTEL users with the capability to capture and manage the processes, observables, and signatures associated with IED operations and use that data for training, analysis, collection planning, and exploitation. - Continued improvements to the DevOps Pipeline and maturing the approach to delivery using containers - Deploy a subset of the Attack the Network Tool Suite (ANTS) application on Non-Classified Local Area Network and an easy navigation directory. - Provide Integration and Test activities against a Battlefield Information Collection and Exploitation System (BICES) instance of Catapult. Upgrade and test all applications to work with Metrics across the ANTS Suite, upgrade the user account and authentication in relation to the F5/Certificate Authentication System, and deploy Horizon Web. - Conduct System Integration of Catapult and all ANTS applications on the new HP Moonshot hardware. - Support proper deployment procedures and provide a test environment for the newly deployed Catapult and ANTS related applications on HP Moonshot hardware. - Test all Catapult and all ANTS applications at a COOP location.					
FY 2020 Base Plans: N/A					
FY 2020 OCO Plans: - Extend current DTRA Mission IT capability (Vantage), which supports Force Protection and Mission Planning, with augmented reality and virtual reality technologies (Examples include: HoloLens and Oculus Rift) - Creation of new 3D visualizations for underwater/Bathymetric datasets to support maritime operations and mitigate new improvised threats					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JS / *Assist Situational Understanding*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
- Integration of C-sUAS geo-spatial enabled data from the cloud architecture (Catapult) with VMS developed applications such as Foxhole to better visualize the effectiveness of proposed C-sUAS systems and optimize C-sUAS system placement in tactical/operational environments - Integration of machine learning for automated geo-spatial feature extraction creating time efficiencies in support of Request for Support (RFS) product delivery to include line of sight analysis, threat vulnerability assessments, and blast modeling. - Develop inter-operability with geo-spatial applications/models across the 70+ production facing developed tool suite. Examples include integrating advanced geo-spatial models with multi-INT data through Team Phoenix developed capabilities to include Voltron and JIDO J6 developed Horizon tool. - Integration of new Data Science environment, which will spawn graph analytics, machine learning, and neural networks against the 126M unique documents resident within Catapult - Cross corpus entity resolution and correlation to identify similar entities across multiple reports and reporting types resident within the Catapult architecture/data lake. This will include techniques to track specific Catapult entities across time and their locations mentioned in relevant reporting. These new techniques will expand DTRA's ability to identify and track improvised threat networks through automation. - Create a set of data preparation micro-services to build an efficient pipeline for incorporation of Catapult data into future Data Science algorithms and experiments. - Enhancing location precision and categorization of Catapult-extracted locations to provide more accurate geospatial plotting of relevant locations. Improvements to Natural Language Processing extraction of location information through supplementing extracted locations with relevant attributes derived from the context of the report. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** The decrease from FY 2019 to FY 2020 is due to the maturation and transition of the Catapult Program of Record (PoR) from an advanced technology development effort to a sustained core capability. Continued RDT&E funding supports engineering and testing of new capabilities developed for DTRA's Quick Reaction Capability (QRC) mission that transition to the PoR for sustainment because they have broader, enduring utility for the DoD community.					
Accomplishments/Planned Programs Subtotals	17.504	13.141	0.000	9.797	9.797

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JS / *Assist Situational Understanding*

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• 10/0602134BR/JS: *Improvised Threat Reduction Applied Research*	0.000	0.000	0.000	1.175	1.175	1.711	1.745	1.780	1.815	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer to provide contractual services to develop and operationalize requirements through the new Enterprise Acquisition Strategy Initiative (EASI) at the least risk, optimal cost and proven technically. Performer base selection includes research developers across DoD and other Government agency laboratories, academia, and industry.

E. Performance Metrics

- Performing contractors operate under a Cost Plus\Award Fee contract measured by a number of mutually agreed Service Level Agreements (SLAs). Measurement \Awards is done semi-annually. The contractor is required to provide Monthly status and progress against the SLAs.
- System metrics are measured by usage to include network, number of users, data, scope, integrations, and access.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Threat Reduction Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JS / *Assist Situational Understanding*	

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
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Direct Operations Support	C/CPAF	Booz Allen Hamilton : Reston, VA	-	1.199	Aug 2018	1.236	Aug 2019	0.000		0.891	Aug 2020	0.891	Continuing	Continuing	-
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Mission IT Capability Development (Automation and Data Science)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	1.799	Aug 2018	1.854	Aug 2019	0.000		1.230	Aug 2020	1.230	Continuing	Continuing	-
Sandia	MIPR	Sandia National Laboratories : Reston, VA	-	0.032	Oct 2017	0.040	Oct 2018	0.000		0.040	Oct 2019	0.040	Continuing	Continuing	-
IRTM	MIPR	Office of Naval Research : Arlington, VA	-	0.257	Aug 2018	0.000		0.000		0.000		0.000	0.000	0.257	0.257
Network	C/FFP	John Hopkins : Baltimore, MD	-	1.815	Jun 2018	0.362	Jan 2019	0.000		0.000		0.000	0.000	2.177	2.177
Vehicle-Borne IED (VBIED)	C/CPFF	Naval Surface Warfare Command : Dahlgren, VA	-	8.500	Jun 2018	1.449	Jan 2019	0.000		0.000		0.000	0.000	9.949	9.949
		Subtotal	-	13.602		4.941		0.000		2.161		2.161	Continuing	Continuing	N/A

Support ($ 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
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Direct Operations Support	C/CPAF	Booz Allen Hamilton : Reston, VA	-	0.400	Aug 2018	0.412	Aug 2019	0.000		0.297	Aug 2020	0.297	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Threat Reduction Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JS / *Assist Situational Understanding*	

Support ($ 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
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Mission IT Capability Development (Automation and Data Science)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	0.599	Aug 2018	0.618	Aug 2019	0.000		0.410	Aug 2020	0.410	Continuing	Continuing	-
QRC IT Network (OIR)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		1.366	Mar 2019	0.000		1.476	Mar 2020	1.476	Continuing	Continuing	-
QRC IT Network (RS)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		0.258	Mar 2019	0.000		0.260		0.260	Continuing	Continuing	-
Sandia	MIPR	Sandia National Laboratories : Reston, VA	-	0.097	Oct 2017	0.168	Oct 2018	0.000		0.120	Oct 2019	0.120	Continuing	Continuing	-
Catapult / CTN Tool Suite Program of Record Support	C/CPAF	Zel Technologies : Reston, VA	-	0.319	Sep 2018	0.550	Sep 2019	0.000		0.500	Sep 2020	0.500	Continuing	Continuing	-
Carnegie Mellon University-Software Engineering Institute (CMU-SEI)	MIPR	Carnegie Mellon University/SEI : Hanscomb AFB, MA	-	0.215	Mar 2018	0.000	Mar 2019	0.000		0.000	Mar 2020	0.000	0.000	0.215	0.215
		Subtotal	-	1.630		3.372		0.000		3.063		3.063	Continuing	Continuing	N/A

Test and Evaluation ($ 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
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Direct Operations Support	C/CPAF	Booz Allen Hamilton : Reston, VA	-	0.400	Aug 2018	0.412	Aug 2019	0.000		0.297	Aug 2020	0.297	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Threat Reduction Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JS / *Assist Situational Understanding*	

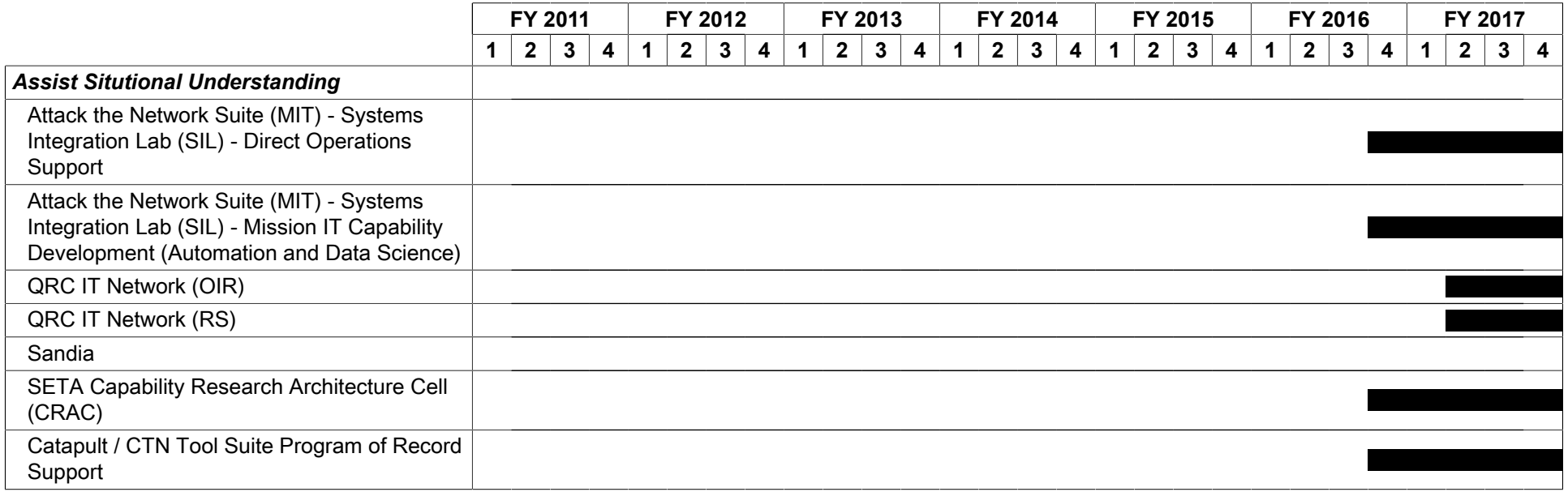
Test and Evaluation ($ in Millions)

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
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Mission IT Capability Development (Automation and Data Science)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	0.599	Aug 2018	0.618	Aug 2019	0.000		0.410	Aug 2020	0.410	Continuing	Continuing	-
QRC IT Network (OIR)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		1.078	Mar 2019	0.000		1.405	Mar 2020	1.405	Continuing	Continuing	-
QRC IT Network (RS)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		1.030	Mar 2019	0.000		1.040	Mar 2020	1.040	Continuing	Continuing	-
Sandia	MIPR	Sandia National Laboratories : Reston, VA	-	0.194	Oct 2017	0.240	Oct 2018	0.000		0.240	Oct 2019	0.240	Continuing	Continuing	-
SETA Capability Research Architecture Cell (CRAC)	C/CPAF	Zel Technologies : Reston, VA	-	1.079	Sep 2018	1.450	Sep 2019	0.000		1.181	Sep 2020	1.181	Continuing	Continuing	-
		Subtotal	-	2.272		4.828		0.000		4.573		4.573	Continuing	Continuing	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	-	17.504		13.141		0.000		9.797		9.797	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JS / *Assist Situational Understanding*



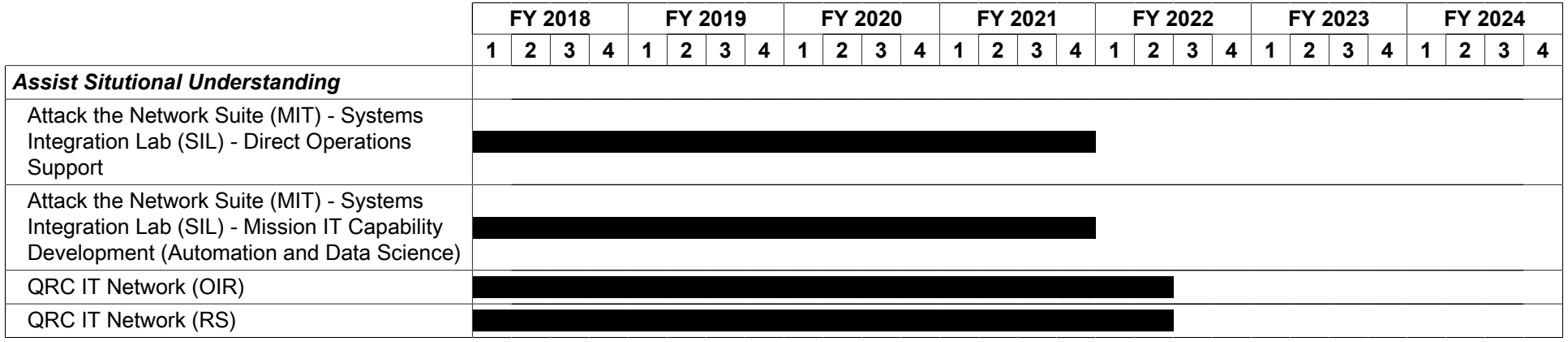


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JS / *Assist Situational Understanding*

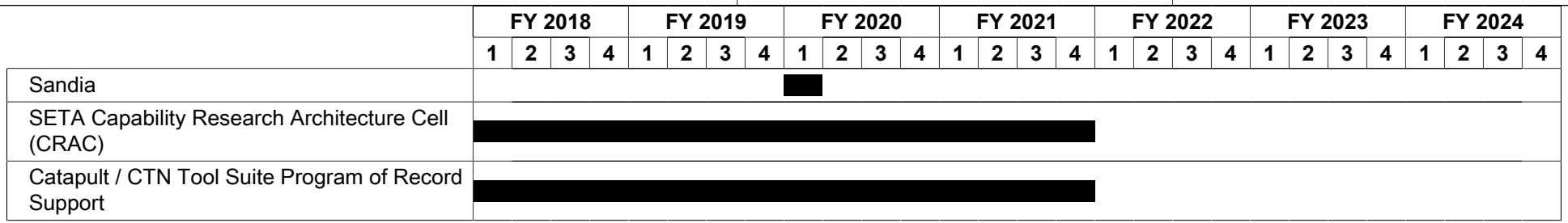


Exhibit R-4A, RDT&E Schedule Details: PB 2020 Defense Threat Reduction Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604134BR / *Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing*	**Project (Number/Name)** JS / *Assist Situational Understanding*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Assist Situtional Understanding				
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Direct Operations Support	4	2016	4	2021
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Mission IT Capability Development (Automation and Data Science)	4	2016	4	2021
QRC IT Network (OIR)	2	2017	2	2022
QRC IT Network (RS)	2	2017	2	2022
Sandia	1	2020	1	2020
SETA Capability Research Architecture Cell (CRAC)	4	2016	4	2021
Catapult / CTN Tool Suite Program of Record Support	4	2016	4	2021