Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army											Date: February 2018	

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					PE 0604121A *I Synthetic Training Environment Refine & Prototype*							

COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	1.600	77.939	-	77.939	56.867	41.863	41.859	41.852	0.000	261.980
FD6: *Synthetic Training Environment Refine & Prototype*	-	0.000	1.600	77.939	-	77.939	56.867	41.863	41.859	41.852	0.000	261.980

Note

The STE Program is a new start in FY 2018.

A. Mission Description and Budget Item Justification

The Synthetic Training Environment (STE) is the next generation holistic collective training capability that will train units at the point of need within the entire range of Multi-Domain Battle tasks in support of Unified Land Operations in a complex operational environment. STE will be a synthetic environment (virtual, constructive, and gaming) utilizing one world terrain, common authoritative data and models that is cloud-enabled through the Army Enterprise Network, and is service-based through the Common Operating Environment. The STE will be available for use anywhere a Soldier needs it and will include Soldier and Squad Immersive Virtual Training (S/SVT) capabilities.

FY 2019 base funding of $77.939 million will develop and demonstrate prototype designs to reduce technical risk, validate designs, validate cost estimates, evaluate processes, and refine requirements. Based on refined requirements and demonstrated prototype designs, integrated systems design of the end-item system can be initiated. Additionally, these efforts ensure the level of expertise required to operate and maintain the product is consistent with the force structure.

B. Program Change Summary ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	1.600	15.044	-	15.044
Current President's Budget	0.000	1.600	77.939	-	77.939
Total Adjustments	0.000	0.000	62.895	-	62.895
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	62.895	-	62.895

Change Summary Explanation

Additional funding provided for STE Research and Development in 2019.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018	

Appropriation/Budget Activity 2040 I 4	R-1 Program Element (Number/Name) PE 0604121A I Synthetic Training Environment Refine & Prototype	Project (Number/Name) FD6 I Synthetic Training Environment Refine & Prototype

COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
FD6: Synthetic Training Environment Refine & Prototype	-	0.000	1.600	77.939	-	77.939	56.867	41.863	41.859	41.852	0.000	261.980
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note
 The STE Program is a new start in FY 2018.

A. Mission Description and Budget Item Justification
 The Synthetic Training Environment (STE) is the next generation holistic collective training capability that will train units at the point of need within the entire range of Multi-Domain Battle tasks in support of Unified Land Operations in a complex operational environment. STE will be a synthetic environment (virtual, constructive, and gaming) utilizing one world terrain, common authoritative data and models that is cloud-enabled through the Army Enterprise Network, and is service-based through the Common Operating Environment. The STE will be available for use anywhere a Soldier needs it and will include Soldier and Squad Immersive Virtual Training (S/SVT) capabilities.

 FY 2019 base funding of $77.939 million will develop and demonstrate prototype designs to reduce technical risk, validate designs, validate cost estimates, evaluate processes, and refine requirements. Based on refined requirements and demonstrated prototype designs, integrated systems design of the end-item system can be initiated. Additionally, these efforts ensure the level of expertise required to operate and maintain the product is consistent with the force structure.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Program Management	-	1.600	5.791

Description: Will provide program management, engineering and technical oversight, contract support, and travel for the development of the program.

FY 2018 Plans:
Funding will be used for Synthetic Training Environment (STE) Program Management to execute Materiel Solutions Analysis (MSA) phase of the STE program with the purpose to choose the concept for the product that will be acquired, to begin translating validated capability gaps into system-specific requirements, including the Key Performance Parameters (KPPs) and Key System Attributes (KSAs), and to conduct planning to support a decision on the acquisition strategy for the product.

FY 2019 Plans:
Funding will be used for Program Management to execute Materiel Solutions Analysis (MSA) phase of the program with the purpose to choose the concept for the product that will be acquired, to begin translating validated capability gaps into system-

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 I 4	R-1 Program Element (Number/Name) PE 0604121A I Synthetic Training Environment Refine & Prototype	Project (Number/Name) FD6 I Synthetic Training Environment Refine & Prototype

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
specific requirements, including the Key Performance Parameters (KPPs) and Key System Attributes (KSAs), and to conduct planning to support a decision on the acquisition strategy for the product. **FY 2018 to FY 2019 Increase/Decrease Statement:** Due to the program being a new start for FY2018, original FY2019 base funding of $15.1 million was increased to $77.939 million in order to accelerate the development and demonstrate prototype designs to reduce technical risk, validate designs, validate cost estimates, evaluate processes, and refine requirements. This funding will provide for earlier demonstrated prototype designs, integrated systems design of the end-item system. Additionally, these efforts ensure the level of expertise required to operate and maintain the product is consistent with the force structure.			
Title: Engineering, Support, Test & Evaluation	-	-	72.148
Description: Will provide Engineering, support, and any related test and evaluation for the development of the program. **FY 2019 Plans:** FY 2019 funding will develop and demonstrate prototype designs to reduce technical risk, validate designs, validate cost estimates, evaluate processes, and refine requirements. Based on refined requirements and demonstrated prototype designs, integrated systems design of the end-item system can be initiated. Additionally, these efforts ensure the level of expertise required to operate and maintain the product is consistent with the force structure. **FY 2018 to FY 2019 Increase/Decrease Statement:** Due to the program being a new start for FY2018, original FY2019 base funding of $15.1 million was increased to $77.939 million in order to accelerate the development and demonstrate prototype designs to reduce technical risk, validate designs, validate cost estimates, evaluate processes, and refine requirements. This funding will provide for earlier demonstrated prototype designs, integrated systems design of the end-item system. Additionally, these efforts ensure the level of expertise required to operate and maintain the product is consistent with the force structure.			
Accomplishments/Planned Programs Subtotals	-	1.600	77.939

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• NA0173: *Aviation Combined Arms Tactical Trainer*	38.000	30.568	32.700	-	32.700	34.243	32.372	36.315	37.007	0.000	241.205

Remarks
 Procurement funding for STE has been embedded in Line Item NA0173 in the amount of $8.4 million for FY2019.

Exhibit R-2A, **RDT&E Project Justification:** PB 2019 Army		**Date:** February 2018
Appropriation/Budget Activity 2040 *I* 4	**R-1 Program Element (Number/Name)** PE 0604121A *I Synthetic Training Environment Refine & Prototype*	**Project (Number/Name)** FD6 *I Synthetic Training Environment Refine & Prototype*

D. Acquisition Strategy

The Synthetic Training Environment (STE) program will employ an incremental acquisition strategy where the full capability will occur in multiple increments as new capability is developed and delivered. During Materiel Solutions Analysis (MSA) and Technology Maturation Risk Reduction (TMRR) phases competitive prototyping development efforts will be conducted through Other Transactional Authority resulting in system prototypes.

E. Performance Metrics

N/A

Exhibit R-3, **RDT&E Project Cost Analysis:** PB 2019 Army										**Date:** February 2018			
Appropriation/Budget Activity 2040 *I* 4						**R-1 Program Element (Number/Name)** PE 0604121A *I Synthetic Training Environment Refine & Prototype*				**Project (Number/Name)** FD6 *I Synthetic Training Environment Refine & Prototype*			

Management Services ($ in Millions)

				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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**
Management Services	Various	PEO STRI : Orlando, FL	-	-		1.600		5.791		-		5.791	0.000	7.391	Continuing
Subtotal			-	-		1.600		5.791		-		5.791	0.000	7.391	N/A

Product Development ($ in Millions)

				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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**
Product Development	TBD	To Be Determined : To Be Determined	-	-		-		70.955		-		70.955	0.000	70.955	-
Subtotal			-	-		-		70.955		-		70.955	0.000	70.955	N/A

Support ($ in Millions)

				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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**
Support Costs	TBD	To Be Determined : To Be Determined	-	-		-		1.193		-		1.193	0.000	1.193	-
Subtotal			-	-		-		1.193		-		1.193	0.000	1.193	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
Project Cost Totals	-	-		1.600		77.939		-		77.939	0.000	79.539	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 I 4	**R-1 Program Element (Number/Name)** PE 0604121A I Synthetic Training Environment Refine & Prototype	**Project (Number/Name)** FD6 I Synthetic Training Environment Refine & Prototype

Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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

Cross Functional Team Phase II — CFT

Materiel Development Decision (MDD) — MDD (1)

Milestone B (MSB) — MSB (2)

Engineering & Manufacturing Development (EMD) — EMD

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 *I* 4	**R-1 Program Element (Number/Name)** PE 0604121A *I Synthetic Training Environment Refine & Prototype*	**Project (Number/Name)** FD6 *I Synthetic Training Environment Refine & Prototype*

Schedule Details

Events	Start		End	
	Quarter	**Year**	**Quarter**	**Year**
Cross Functional Team Phase II	2	2018	2	2019
Materiel Development Decision (MDD)	2	2019	2	2019
Milestone B (MSB)	2	2019	2	2019
Engineering & Manufacturing Development (EMD)	2	2019	4	2023