Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Office of the Secretary Of Defense	Date: March 2024
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 0604125D8Z *I Advanced Manufacturing Components and Prototypes*

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	0.000	16.776	-	16.776	45.649	59.363	65.713	67.027	Continuing	Continuing
232: *Advanced Manufacturing Components and Prototypes*	0.000	0.000	0.000	16.776	-	16.776	45.649	59.363	65.713	67.027	Continuing	Continuing

Note

New Start (Y/N): Yes

The National Defense Strategy (NDS) directs the Department of Defense (DoD) to seed opportunities in critical technology areas, including biotechnology, as part of our broader responsibility to ensure enduring U.S. technological advantage, and the Department will use this program element to execute the Administration's vision for advanced manufacturing of critical technologies. Projects under this program element (PE) will mature manufacturing processes to support the transition of advanced manufacturing components and prototypes to address warfighter needs. Initial funding for this PE is focused on requirements emerging from the Defense Biomanufacturing Strategy, which is guiding the execution of Manufacturing Enabled by Modular and Reusable (MEMBR) assets initiative investments to scale up domestic manufacturing of bioindustrial products.

A. Mission Description and Budget Item Justification

The Advanced Manufacturing Components and Prototypes (AMCAP) program element is established to validate the build and/or expansion of advanced manufacturing infrastructure and conduct research, develop, test, and evaluation (RDT&E) to facilitate development and transition of promising advanced manufacturing technologies to higher manufacturing readiness levels (MRL) via component and prototype development. Projects conducted under this program element will cover the full range of technologies critical to the Department of Defense (DoD) and manufacturing technologies with dual-use commercial applications to support the industrial base that will supply the DoD.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	0.000	0.000	16.911	-	16.911
Current President's Budget	0.000	0.000	16.776	-	16.776
Total Adjustments	0.000	0.000	-0.135	-	-0.135
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	-0.169	-	-0.169

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• Economic Assumptions	-	-	0.034	-	0.034

Change Summary Explanation

As a new start in FY 2025, the $16.742 million will fund advanced manufacturing prototype projects in technology areas critical to the Department of Defense (DoD) including one or more projects for scale-up of biotechnology products developed for DoD.

A reduction of $0.169 million in FY 2025 was applied to meet DoD overall funding reductions, which were spread to mitigate impact. Funding increase of $0.034 million in FY 2025 for Economic Assumptions.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Office of the Secretary Of Defense			Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604125D8Z / *Advanced Manufacturing Components and Prototypes*	Project (Number/Name) 232 / *Advanced Manufacturing Components and Prototypes*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
232: *Advanced Manufacturing Components and Prototypes*	0.000	0.000	0.000	16.776	-	16.776	45.649	59.363	65.713	67.027	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Advanced Manufacturing Components and Prototypes (AMCAP) project is established to validate the build and/or expansion of advanced manufacturing infrastructure and conduct research, develop, test, and evaluation (RDT&E) to facilitate development and transition of promising advanced manufacturing technologies to higher manufacturing readiness levels (MRL) via component and prototype development across multiple technology areas.

With initial emphasis in the bioindustrial manufacturing area, the project will advance the scale up production of molecules of interest. Through the biotechnology Manufacturing Enabled by Modular Bioindustrial & Reusable (MEMBR) assets initiative, the project will establish a network of flexible manufacturing facilities to scale-up promising biotechnology capabilities for integration into DoD missions.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Pilot-Scale Production of Bioindustrial Products	-	-	16.776
Description: Bioindustrial projects to scale up promising molecules utilizing flexible bioindustrial manufacturing facilities. Biotechnology activities could include, but are not limited to, initial pilot or production scale batches, producing material needed for qualification to a military or commercial specification, test batches to facilitate the technology transfer from a pilot facility to an industrial scale facility, development of downstream processing techniques at scale, standard operating procedure (SOP) development, and test and evaluation. The biotechnology projects are to be performed in bioindustrial infrastructure funded by DoD. ***FY 2025 Plans:*** Conduct bioindustrial initial pilot or production scale batches of candidate molecules to prove capability to produce material for military needs. Prepare test batches to facilitate technology transfer of products to available industrial scale facilities and develop downstream processing techniques supporting production at scale. Develop and apply initial standard operating procedures (SOP) for at scale production. Conduct test and evaluation to validate and prove processes used. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** As a new start, the FY 2025 funding of $16.776 million will enable multiple scale-up projects of bioindustrial technology products developed for the Department of Defense.			
Accomplishments/Planned Programs Subtotals	-	-	16.776

Exhibit R-2A, RDT&E Project Justification: PB 2025 Office of the Secretary Of Defense		Date: March 2024
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604125D8Z / *Advanced Manufacturing Components and Prototypes*	**Project (Number/Name)** 232 / *Advanced Manufacturing Components and Prototypes*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Office of the Secretary Of Defense			Date: March 2024
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604125D8Z / *Advanced Manufacturing Components and Prototypes*	**Project (Number/Name)** 232 / *Advanced Manufacturing Components and Prototypes*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technoeconomic analyses & feasibility assessments	C/TBD	TBD : Multiple Locations	-	-		-		1.517		-		1.517	Continuing	Continuing	1.550
Technology transfer and process flow	C/TBD	TBD : TBD	-	-		-		3.377		-		3.377	Continuing	Continuing	3.411
Pilot process optimization and production of biomaterials	C/Various	TBD : Multiple Locations	-	-		-		9.000		-		9.000	Continuing	Continuing	9.000
		Subtotal	-	-		-		13.894		-		13.894	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Qualification testing of biomaterial to military and/ or industrial specifications	C/TBD	AFRL and TBD : Wright-Patterson AFB and Other Location	-	-		-		1.466		-		1.466	Continuing	Continuing	1.500
		Subtotal	-	-		-		1.466		-		1.466	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Bioindustrial Scale-Up Management Services	C/TBD	BioMADE Manufacturing Innovation Institute : Twin Cities, MN and Emeryville, CA	-	-		-		1.416		-		1.416	Continuing	Continuing	1.450
		Subtotal	-	-		-		1.416		-		1.416	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Office of the Secretary Of Defense			Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604125D8Z / *Advanced Manufacturing Components and Prototypes*	Project (Number/Name) 232 / *Advanced Manufacturing Components and Prototypes*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		-		16.776		-		16.776	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Office of the Secretary Of Defense		Date: March 2024
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604125D8Z / *Advanced Manufacturing Components and Prototypes*	**Project (Number/Name)** 232 / *Advanced Manufacturing Components and Prototypes*

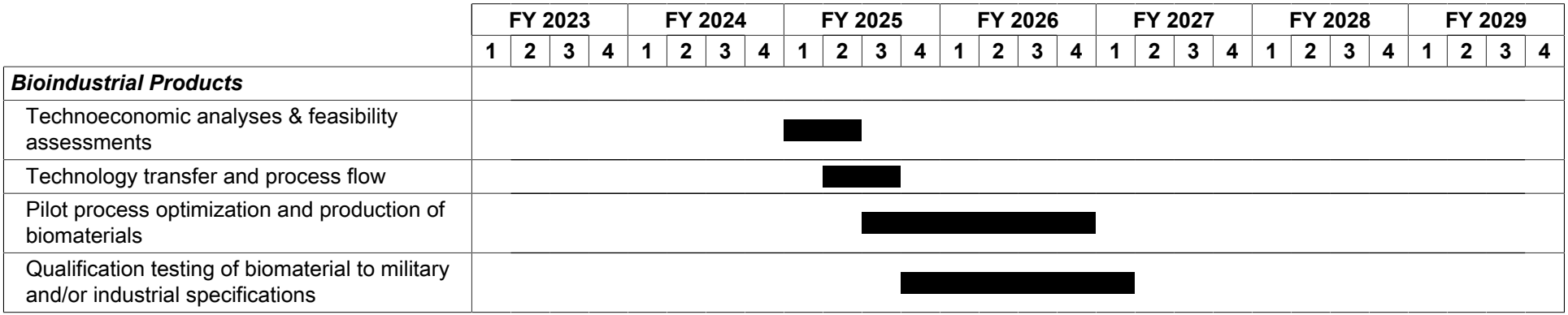

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Office of the Secretary Of Defense		Date: March 2024
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604125D8Z / *Advanced Manufacturing Components and Prototypes*	**Project (Number/Name)** 232 / *Advanced Manufacturing Components and Prototypes*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Bioindustrial Products				
Technoeconomic analyses & feasibility assessments	1	2025	2	2025
Technology transfer and process flow	2	2025	3	2025
Pilot process optimization and production of biomaterials	3	2025	4	2026
Qualification testing of biomaterial to military and/or industrial specifications	4	2025	1	2027