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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
3600: <i>Research, Development, Test & Evaluation, Air Force I BA 3: Advanced Technology Development (ATD)</i>					PE 0603680F <i>I Manufacturing Technology Program</i>							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	40.221	52.772	42.630	-	42.630	46.344	45.386	40.700	41.510	Continuing	Continuing
635280: <i>Manufacturing Technologies</i>	-	40.221	52.772	42.630	-	42.630	46.344	45.386	40.700	41.510	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Manufacturing Technology program executes technical programs to maintain and develop an affordable and reliable industrial base and manufacturing capability that will be responsive to warfighter needs. The program develops and improves manufacturing technologies and processes to enable cost reduction, improve component and system quality, and enhance industrial capability. Value stream modifications and manufacturing throughput improvements are effected to shorten cycle times of weapon systems during design, development, production and sustainment. Manufacturing Technologies objectives are conducted through industrial partnerships which enable the demonstration of manufacturing technologies for existing weapon system upgrades and/or for new warfighter systems. Efforts in the program have been coordinated through the Department of Defense Science and Technology Executive Committee process to harmonize efforts and eliminate duplication. Manufacturing Technologies is in Budget Activity 3, Advanced Technology Development, since it develops and demonstrates manufacturing technologies for existing upgrades and/or new system developments that have military utility and address warfighter needs.

B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	41.353	42.772	43.164	-	43.164
Current President's Budget	40.221	52.772	42.630	-	42.630
Total Adjustments	-1.132	10.000	-0.534	-	-0.534
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	10.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.132	-			
• Other Adjustments	-	-	-0.534	-	-0.534

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 635280: *Manufacturing Technologies*

Congressional Add: *Additive Manufacturing*

Congressional Add Subtotals for Project: 635280

FY 2014	FY 2015
-	10.000
-	10.000

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Congressional Add Details (\$ in Millions, and Includes General Reductions)			FY 2014	FY 2015
Congressional Add Totals for all Projects			-	10.000
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016
Title: Sustainment Manufacturing Technologies		12.158	11.880	11.841
Description: Develop and implement cost-effective maintenance, repair, and manufacturing technologies for sustainment of Air Force weapon systems.				
FY 2014 Accomplishments: Developed cost effective conventional and low-observable production and repair technologies enabling affordable sustainment of aircraft systems. Conducted assessments and developed manufacturing technology to reduce logistics support costs, lead times, and cycle times for depot repair.				
FY 2015 Plans: Continue development of cost effective conventional and low-observable production and repair technologies to enable affordable sustainment of aircraft systems. Continue manufacturing technology development for depot maintenance.				
FY 2016 Plans: Continue development of cost effective conventional and low-observable production and repair technologies to enable affordable sustainment of aircraft systems. Continue manufacturing technology development for depot maintenance.				
Title: Advanced Manufacturing Technologies		28.063	30.892	30.789
Description: Develop and transition pervasive affordability and producibility technologies for weapon systems and processes.				
FY 2014 Accomplishments: Developed and demonstrated next generation agile manufacturing methods, commercial/military integration, quality processing and supply chain improvements. Developed and demonstrated manufacturing capabilities for more affordable and hot structures, advanced propulsion technologies, Air Force munitions, and electronics manufacturing technologies for communications, space solar cells, advanced Active Electronically Scanned Array (AESA) sensor applications, and Mid Wave Infrared optics. Conducted agile manufacturing risk reduction assessments on intelligence, surveillance, and reconnaissance components.				
FY 2015 Plans: Continue development and demonstration of manufacturing capabilities for more affordable advanced turbine engine propulsion technologies, communications technologies, advanced AESA sensor applications, and Mid-Wave Infrared optics producibility.				

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016
Continue development of agile manufacturing applications and hot structures affordability and continue to mature advanced material development.				
FY 2016 Plans: Continue development and demonstration of manufacturing capabilities for more affordable advanced turbine engine propulsion technologies, communications technologies, advanced AESA sensor applications, and Mid-Wave Infrared optics producibility. Continue development of agile manufacturing applications and hot structures affordability and continue to mature advanced material development.				
Accomplishments/Planned Programs Subtotals		40.221	42.772	42.630
		FY 2014	FY 2015	
Congressional Add: Additive Manufacturing		-	10.000	
FY 2015 Plans: Conduct Congressionally-directed effort.				
Congressional Adds Subtotals		-	10.000	
D. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
E. Acquisition Strategy				
N/A.				
F. Performance Metrics				
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.				