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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0604317F I Technology Transfer							
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	-	8.080	3.295	12.960	0.000	12.960	13.021	13.071	13.141	13.201	Continuing	Continuing
646003: Partnership Intermediary Agreement(s)	-	8.080	3.295	3.035	0.000	3.035	3.096	3.146	3.213	3.271	Continuing	Continuing
646030: AFwerX	-	0.000	0.000	9.925	0.000	9.925	9.925	9.925	9.928	9.930	Continuing	Continuing

## Note

Note: In FY 2012, the Office of the Secretary of Defense (OSD) transferred the Partnership Intermediary Agreement effort to the Air Force.

## A. Mission Description and Budget Item Justification

Technology Transfer was titled Defense Technology Transfer and Defense Technology Link (TechLink) in previous Office of the Secretary of Defense (OSD) budgets. The program was devolved from OSD in FY12 to achieve efficiencies in program management. TechLink, DoD's first National level Partnership Intermediary (PI), was established by OSD in 1999 to provide direct Technology Transfer support to all Air Force, Army, Navy, and independent DoD Research Laboratories. TechLink is a performance based, metrics-driven organization.

TechLink brokers technology transfer agreements between Department of Defense (DoD) laboratories and US industry for the manufacture and use of DoD inventions. These agreements enable DoD to leverage the investment and capabilities of the private-sector in development of new defense-related products and services, lowering DoD costs and also helping ensure that DoD-developed or co-developed technologies are transitioned to DoD operational use. This program impacts virtually all technology fields, including medicine, software, electronics, communications, advanced materials, and energy-related technologies.

In FY 2019, Project 646030, AFWERX, was created under this program element to provide centralized funding for AFWERX activities. AFWERX will link innovators to the Air Force's research and development activities, program offices, development planning & experimentation teams, and end users. These linkages will create capability options and prototype opportunities for the Air Force. AFWERX was previously funded in FY 2017 and FY 2018 with execution year funding from various Air Force Science and Technology (S&T) RDT&E program elements.

This Program is Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force				Date: February 2018	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)		PE 0604317F I Technology Transfer			
B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	3.368	3.295	3.058	0.000	3.058
Current President's Budget	8.080	3.295	12.960	0.000	12.960
Total Adjustments	4.712	0.000	9.902	0.000	9.902
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	5.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.288	0.000			
• Other Adjustments	0.000	0.000	9.902	0.000	9.902
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 646003: Partnership Intermediary Agreement(s)				FY 2017	FY 2018
Congressional Add: Program Increase				4.828	0.000
Congressional Add Subtotals for Project: 646003				4.828	0.000
Congressional Add Totals for all Projects				4.828	0.000
Change Summary Explanation					
Increase in FY 2019 for AFWERX activities.					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0604317F / Technology Transfer				Project (Number/Name) 646003 / Partnership Intermediary Agreement(s)			
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
646003: Partnership Intermediary Agreement(s)	-	8.080	3.295	3.035	0.000	3.035	3.096	3.146	3.213	3.271	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project accomplishes the following: (1) establish license agreements to transfer patented inventions from Department of Defense (DoD) research laboratories to industry for conversion into new dual-use products and services to support DoD's defense mission and benefit the US economy; and (2) establish collaborative research and development agreements (CRADAs) with the private-sector for development of new, innovative, dual-use technology. Both of these activities enable DoD to leverage the investment and capabilities of the private-sector in development of new defense-related products and services, lowering DoD costs and also helping ensure that DoD-developed or co-developed technologies are transitioned to DoD operational use.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2017	FY 2018	FY 2019	
Title: Technology Transfer									3.252	3.295	3.035	
Description: Enhance and expand transfer of technologies between Department of Defense (DoD) and the commercial sector.												
FY 2018 Plans: Implement cost effective approaches to increase and accelerate transfer of technologies developed at DoD laboratories and facilitate their transition to the warfighter. Evaluate and market DoD laboratory inventions and broker technology transfer agreements/collaborative research and development agreements (CRADAs), to include commercial licenses, that support the US defense mission and benefit the US economy. Engage the innovative capabilities of non-traditional defense contractors in developing and commercializing new dual-use products and services.												
FY 2019 Plans: Continue to implement cost effective approaches to increase and accelerate transfer of technologies developed at DoD laboratories and facilitate their transition to the warfighter. Evaluate and market DoD laboratory inventions and broker technology transfer agreements/CRADAs, to include commercial licenses, that will support the US defense mission and benefit the US economy. Engage the innovative capabilities of non-traditional defense contractors in developing and commercializing new dual-use products and services.												
FY 2018 to FY 2019 Increase/Decrease Statement: FY 2019 decreased compared to FY 2018 by \$0.260 million. Justification for this decrease is due to Office of Defense (OSD) deflation factors.												
Accomplishments/Planned Programs Subtotals									3.252	3.295	3.035	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Air Force		<b>Date:</b> February 2018	
<b>Appropriation/Budget Activity</b> 3600 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604317F / <i>Technology Transfer</i>	<b>Project (Number/Name)</b> 646003 / <i>Partnership Intermediary Agreement(s)</i>	
		<b>FY 2017</b>	<b>FY 2018</b>
<b>Congressional Add:</b> Program Increase		4.828	0.000
<b>FY 2017 Accomplishments:</b> Conducted Congressionally directed effort			
<b>FY 2018 Plans:</b> Not applicable			
<b>Congressional Adds Subtotals</b>		4.828	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
N/A			
<b>D. Acquisition Strategy</b>			
This effort uses a Partnership Intermediary Agreement (PIA) with TechLink at Montana State University. Through this agreement TechLink helps the Department of Defense to establish licensing and other technology transfer agreements with US industry. The effort is run through the Air Force Research Laboratory/Small Business office at Wright Patterson Air Force Base.			
<b>E. Performance Metrics</b>			
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.			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0604317F / Technology Transfer				Project (Number/Name) 646003 / Partnership Intermediary Agreement(s)					
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
License DoD inventions for conversion into new products and services	PO	TechLink : Bozeman, MT	-	3.252	Apr 2017	3.295	Apr 2018	3.035	Apr 2019	-		3.035	Continuing	Continuing	-
Congressional Add - Enhance technology transfer activities and outreach	PO	TechLink : Bozeman, MT	-	1.600	Dec 2017	-		-		-		-	Continuing	Continuing	-
Congressional Add - Increase transition support and outreach to manufacturing and sustainment activities	PO	MilTech : Bozeman, MT	-	1.000	Dec 2017	-		-		-		-	Continuing	Continuing	-
Congressional Add - Advance Intellectual property/commercialization activities	PO	Various : Various	-	0.928	Jul 2018	-		-		-		-	Continuing	Continuing	-
Congressional Add Expand legal counsel support for technology transfer activities	PO	TBD : TBD	-	1.300	Feb 2018	-		-		-		-	Continuing	Continuing	-
Subtotal			-	8.080		3.295		3.035		-		3.035	Continuing	Continuing	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			-	8.080		3.295		3.035		-		3.035	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force										Date: February 2018			
Appropriation/Budget Activity					R-1 Program Element (Number/Name)					Project (Number/Name)			
3600 / 4					PE 0604317F / <i>Technology Transfer</i>					646003 / <i>Partnership Intermediary Agreement(s)</i>			

	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
<i>Partnership Intermediary</i>																												
Tech Transfer Partnership Intermediary																												
Congressional Add																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Air Force		<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 3600 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604317F / <i>Technology Transfer</i>	<b>Project (Number/Name)</b> 646003 / <i>Partnership Intermediary Agreement(s)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Partnership Intermediary</i></b>				
Tech Transfer Partnership Intermediary	1	2017	4	2023
Congressional Add	1	2017	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0604317F / <i>Technology Transfer</i>				Project (Number/Name) 646030 / <i>AFwerX</i>			
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
646030: <i>AFwerX</i>	-	0.000	0.000	9.925	0.000	9.925	9.925	9.925	9.928	9.930	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project improves Air Force capabilities by connecting innovators, simplifying technology transfer, and accelerating results. AFWERX will accomplish this mission by: (1) Connecting diverse, innovative members from industry, academia, and government; (2) Creating capabilities options and prototype opportunities for the Air Force; (3) Facilitating streamlined acquisition processes; and (4) Fostering a culture of innovation in the Air Force.

In FY 2019, Project 646030, AFWERX, was created under PE 0604317F, Technology Transfer, to provide centralized funding for AFWERX activities. This is an administrative alignment and not a new start. AFWERX was previously funded in FY 2017 and FY 2018 with execution year funding from various Air Force Science and Technology (S&T) RDT&E program elements.

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

	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<b>Title:</b> AFWERX	0.000	0.000	9.925
<b>Description:</b> Connect diverse, innovative members from industry, academia, and government to create capabilities options and prototype opportunities for the Air Force.			
<b>FY 2018 Plans:</b> For FY 2017 and FY 2018, this work is performed with execution year funding from various Air Force Science and Technology (S&T) RDT&E program elements. Stood up two AFWERX innovation hubs locations, District of Columbia (DC) and the Las Vegas. Continue to host events, implement new innovative competitions, collaborate with academia and think tanks, and work with industry through technology accelerator programs.			
<b>FY 2019 Plans:</b> Continue to utilize the DC Innovation Hub and the Las Vegas Innovation Hub to host events, implement new innovative competitions, collaborate with academia and think tanks, and work with industry through technology accelerator programs. Additional AFWERX Innovation Hub locations may be added as directed by Air Force Senior Leadership.			
<b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> FY 2019 increased compared to FY 2018 by \$9.925 million. Justification for this increase is due to the Air Force centralizing funding for AFWERX activities.			
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	0.000	9.925

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Air Force		<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 3600 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604317F / <i>Technology Transfer</i>	<b>Project (Number/Name)</b> 646030 / <i>AFwerX</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>Remarks</b>		
<b>D. Acquisition Strategy</b> The District of Columbia (DC) Innovation Hub and the Las Vegas Innovation Hub are contracted under existing Air Force Research Laboratory (AFRL) Partnership Intermediary Agreements (PIAs) which have already been awarded. The DC Innovation Hub is under a PIA with Virginia Tech Applied Research Corporation and the Vegas Innovation Hub is under a PIA with DefenseWerk.		
<b>E. Performance Metrics</b> 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.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 4						R-1 Program Element (Number/Name) PE 0604317F / Technology Transfer				Project (Number/Name) 646030 / AFwerX					
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
Las Vegas Innovation Hub	PO	Defensewerx : Ft Walton Beach, FL	-	-		-		5.000		-		5.000	Continuing	Continuing	-
DC Innovation Hub	PO	VA Tech Applied Res Corp : Arlington, VA	-	-		-		4.925		-		4.925	Continuing	Continuing	-
Subtotal			-	-		-		9.925		-		9.925	Continuing	Continuing	N/A

### Remarks

The DC Innovation Hub stood up in FY 2017. The Las Vegas Innovation Hub opened in January 2018. Operating costs for these innovation hubs are funded in FY 2017 and FY 2018 with execution year funding from various Air Force Science and Technology (S&T) RDT&E program elements.

Additional innovation hubs may be opened in FY 2019 as directed by Air Force Senior Leadership.

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	-	-		0.000		9.925		-		9.925	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force						Date: February 2018					
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)			
3600 / 4				PE 0604317F / <i>Technology Transfer</i>				646030 / <i>AFwerX</i>			

	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
<i>AFwerX</i>																												
AFwerX																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Air Force			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 3600 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604317F / <i>Technology Transfer</i>	<b>Project (Number/Name)</b> 646030 / <i>AFwerX</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>AFwerX</i></b>				
AFwerX	1	2019	4	2023

**Note**

The DC Innovation Hub stood up in FY 2017. The Las Vegas Innovation Hub opened in January 2018. Operating costs for these innovation hubs are funded in FY 2017 and FY 2018 with execution year funding from various Air Force Science and Technology (S&T) RDT&E program elements.