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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604317F / <i>Technology Transfer</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	-	37.269	16.980	15.768	0.000	15.768	-	-	-	-	-	-
646003: <i>Partnership Intermediary Agreement(s)</i>	-	17.096	16.980	1.000	0.000	1.000	-	-	-	-	-	-
646030: <i>AFwerX</i>	-	20.173	0.000	14.768	0.000	14.768	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Technology Transfer is a critical strategy for the NDS and DoD that makes the best possible use of national scientific, technical resources and information to enhance the effectiveness of DoD forces and warfighting capability systems. The Air Force Technology Transfer program oversees all Air Force inventions/patents and technology transfer agreements.

In FY 2012, DoD devolved management of OSD sponsored Partnership Intermediaries (PIAs) to the Air Force (AF). The Air Force Technology Transfer & Transition Office manages the Montana State University's TechLink & MilTech PIAs as well as AF PIAs. TechLink brokered 70% of DoD licenses over the past 10 years. The 646003 project includes the management of DoD/AF PIAs, Federal Lab Consortium Fees, invention disclosure & patent fees, information management data base, travel, training, outreach and tech scouting events. This program impacts virtually all technology fields, including medical, software, electronics, communications, advanced materials, energy-related technologies, and more. This effort support our mission to innovate and modernize DoD weapon systems through collaborative teamwork and strategic partnerships.

The AFWERX mission is to transition agile, affordable, and accelerated capabilities by teaming commercial technology developers with Airmen and Guardian talent. AFWERX leverages Spark (the Airmen and Guardian talent base), AFVentures (the dual-use expanded technology base), and Prime to scale and accelerate the capability. Funding in this project supports AFWERX research and development, non-SBIR/STTR civilian personnel pay, innovation hubs, and non-SBIR/STTR information technology, public affairs, and marketing. The Spark mission is to expand and empower the network of Airmen and Guardian talent that is ready, willing, and able to enhance capability developed with a culture of innovation. AFWERX uses Spark to discover and translate innovative talent into executable projects by facilitating stakeholder alignment through workshops and challenges. This inspires and ignites creativity as well as creates a bridge to the small business ecosystem reached through the SBIR/STTR program. This connection brings together the creativity, innovation, and entrepreneurial spirit of small businesses and our Airmen and Guardians to solve Air and Space Force technology and capability gaps.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver Technology Transfer capabilities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F.

In FY 2022, all efforts and civilian manpower under project 646030, AFWERX, were realigned from the Air Force Operations and Maintenance (O&M) appropriation, Budget Activity (BA-04), to now use Research, Development, Test, and Evaluation funds.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604317F / <i>Technology Transfer</i>
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This effort is in 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.

B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	37.614	3.011	3.218	0.000	3.218
Current President's Budget	37.269	16.980	15.768	0.000	15.768
Total Adjustments	-0.345	13.969	12.550	0.000	12.550
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	-0.345	13.969	12.550	0.000	12.550

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

Project: 646003: *Partnership Intermediary Agreement(s)*

Congressional Add: *Program Increase - technology partnerships*

Congressional Add: *Program increase - academic partnership intermediary agreement tech transfer*

Congressional Add Subtotals for Project: 646003

Congressional Add Totals for all Projects

	FY 2020	FY 2021
	4.000	4.000
	10.000	10.000
Congressional Add Subtotals for Project: 646003	14.000	14.000
Congressional Add Totals for all Projects	14.000	14.000

Change Summary Explanation

1) Increase in FY 2021 of 14 million due to congressional add in project 646003.

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force										Date: May 2021		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0604317F / <i>Technology Transfer</i>				Project (Number/Name) 646003 / <i>Partnership Intermediary Agreement(s)</i>			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
646003: <i>Partnership Intermediary Agreement(s)</i>	-	17.096	16.980	1.000	0.000	1.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

In FY 2012, DoD devolved management of OSD sponsored Partnership Intermediaries (PIs) to the Air Force (AF). The Air Force Technology Transfer & Transition Office manages the Montana State University's TechLink & MilTech Partnership Intermediary Agreements (PIAs) as well as Air Force Partnership Intermediary Agreements (PIAs). TechLink brokered 70% of DoD licenses over the past 10 years. Technology Transfer is a critical strategy for the National Defense Strategy and DoD that makes the best possible use of national scientific, technical resources and information to enhance the effectiveness of DoD forces and warfighting capability systems. The Air Force Technology Transfer program oversees all AF inventions/patents and technology transfer agreements. This project includes the management of DoD/AF PIAs, Federal Lab Consortium Fees, invention disclosure & patent fees, information management data base, travel, training, outreach and tech scouting events. This program impacts virtually all technology fields, including medical, software, electronics, communications, advanced materials, energy-related technologies, and more. This effort support our mission to innovate and modernize DoD weapon systems through collaborative teamwork and strategic partnerships.

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

	FY 2020	FY 2021	FY 2022
Title: Technology Transfer	3.096	2.980	1.000
Description: Enhance and expand transfer of technologies between DoD and the commercial sector.			
FY 2021 Plans: Evaluate and market DoD laboratory inventions and broker license and other technology transfer agreements/ CRADAs between DoD research labs and U.S. companies to support the U.S. defense mission and benefit the U.S. economy. Implement new cost-effective approaches to increase and accelerate transfer of DoD lab technologies and facilitate their transition to DoD operational use. This effort will focus primarily on the non-traditional defense industrial base and is intended to leverage the innovativeness, resources, and capabilities of the private-sector in developing and commercializing new dual-use products and services.			
FY 2022 Plans: Continue to implement new cost-effective approaches to further 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/Cooperative Research and Development 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 2021 to FY 2022 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604317F / <i>Technology Transfer</i>	Project (Number/Name) 646003 / <i>Partnership Intermediary Agreement(s)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
The FY 2022 funding request was decreased by \$1.980 million due to higher DoD priorities.			
Accomplishments/Planned Programs Subtotals	3.096	2.980	1.000

	FY 2020	FY 2021
Congressional Add: Program Increase - technology partnerships <i>FY 2020 Accomplishments:</i> Conduct Congressionally directed efforts. <i>FY 2021 Plans:</i> Conduct Congressionally directed effort	4.000	4.000
Congressional Add: Program increase - academic partnership intermediary agreement tech transfer <i>FY 2020 Accomplishments:</i> Conduct Congressionally directed efforts. <i>FY 2021 Plans:</i> Conduct Congressionally directed effort	10.000	10.000
Congressional Adds Subtotals	14.000	14.000

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

N/A

D. Acquisition Strategy

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.

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604317F / <i>Technology Transfer</i>	Project (Number/Name) 646003 / <i>Partnership Intermediary Agreement(s)</i>

FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
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 - technology partnerships	
Congressional Add - academic partnership intermediary agreement tech transfer	

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604317F / <i>Technology Transfer</i>	Project (Number/Name) 646003 / <i>Partnership Intermediary Agreement(s)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Partnership Intermediary</i>				
Tech Transfer Partnership Intermediary	1	2020	4	2026
Congressional Add - technology partnerships	1	2020	4	2020
Congressional Add - academic partnership intermediary agreement tech transfer	1	2020	4	2020

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force										Date: May 2021		
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 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
646030: <i>AFwerX</i>	-	20.173	0.000	14.768	0.000	14.768	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The AFWERX mission is to transition agile, affordable, and accelerated capabilities by teaming commercial technology developers with Airmen and Guardian talent. AFWERX leverages Spark (the Airmen and Guardian talent base), AFVentures (the dual-use expanded technology base), and Prime to scale and accelerate the capability. Funding in this project supports AFWERX research and development, non-Small Business Innovation Research/ Small Business Technology Transfer (SBIR/ STTR) civilian personnel pay, innovation hubs, and non-SBIR/STTR information technology, public affairs, and marketing. The Spark mission is to expand and empower the network of Airmen and Guardian talent that is ready, willing, and able to enhance capability developed with a culture of innovation. AFWERX uses Spark to discover and translate innovative talent into executable projects by facilitating stakeholder alignment through workshops and challenges. This inspires and ignites creativity as well as creates a bridge to the small business ecosystem reached through the SBIR/STTR program. This connection brings together the creativity, innovation, and entrepreneurial spirit of small businesses and our Airmen and Guardians to solve Air and Space Force technology and capability gaps.

In FY 2022, all efforts and civilian manpower under Project 646030, AFWERX, were transferred from the Air Force Operations and Maintenance (O&M) appropriation, Budget Activity (BA-04), to now use Research, Development, Test, and Evaluation funds for proper execution of AFWERX activities.

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

	FY 2020	FY 2021	FY 2022
Title: AFWERX	20.173	0.000	14.768
Description: Transition affordable, and accelerated capabilities by teaming commercial technology developers with Airmen and Guardian talent.			
FY 2021 Plans: N/A			
FY 2022 Plans: Continue to drive capability development and technology transition through AFWERX core activities supporting all divisions: Innovation Hubs enable seamless connections with and among industry, academia and government personnel; Products and Training provide Airmen/Guardian innovators with the mindset, experience, and tools they need to effectively transition solutions to the field at scale; Innovation Facilitation enhances innovation outcomes by guiding Airmen/Guardians through critical elements of effective innovation (proper problem scoping, program design, stakeholder alignment, industry outreach, etc.) and transition funding supports development of high-impact technology solutions. Also to develop/sustain the Acquisition Workforce.			
FY 2021 to FY 2022 Increase/Decrease Statement:			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force	Date: May 2021
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Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604317F / <i>Technology Transfer</i>	Project (Number/Name) 646030 / <i>AFwerX</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
Increase in FY 2022 of \$14.768 million due to realignment of AFWERX funding from O&M to RDT&E.			
Accomplishments/Planned Programs Subtotals	20.173	0.000	14.768

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

The Innovation Hubs, Products and Training, and Innovation Facilitation are awarded through a combination of Partnership Intermediary Agreements and competitive contract vehicles, some of which are directly awarded by AFWERX and others are executed through federal partnerships as appropriate.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force **Date:** May 2021

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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Innovation Hub (Collaboration Space, Operations)	PO	DefenseWerx : Ft Walton Beach, FL	-	7.955	Jan 2020	-		3.100		-		3.100	-	-	-
Facilitation (Challenges, Workshops & Events)	PO	VA Tech Applied Res Corp : Arlington, VA	-	5.525	Jan 2020	-		2.200		-		2.200	-	-	-
Prototype & Transition	MIPR	Capital-Factory : Austin, TX	-	0.500	Jan 2020	-		0.700		-		0.700	-	-	-
Product Development and Tools & Training	Various	All AFWERX locations : TBD	-	5.600	Jan 2020	-		3.200		-		3.200	-	-	-
Subtotal			-	19.580		-		9.200		-		9.200	-	-	N/A

Remarks
In FY 2022, all efforts and civilian manpower under Project 646030, AFWERX, were realigned from the Air Force Operations and Maintenance (O&M) appropriation, Budget Activity (BA-04), to now use Research, Development, Test, and Evaluation funds.

Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Acquisition workforce	Allot	HQ Air Force : Arlington, VA	-	0.593	Oct 2019	-		5.568		-		5.568	-	-	-
Subtotal			-	0.593		-		5.568		-		5.568	-	-	N/A

Remarks
In FY 2022, all efforts and civilian manpower under Project 646030, AFWERX, were realigned from the Air Force Operations and Maintenance (O&M) appropriation, Budget Activity (BA-04), to now use Research, Development, Test, and Evaluation funds.

	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		-	20.173	0.000	14.768	14.768	-	-	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604317F / <i>Technology Transfer</i>	Project (Number/Name) 646030 / <i>AFwerX</i>
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FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
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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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604317F / <i>Technology Transfer</i>	Project (Number/Name) 646030 / <i>AFwerX</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>AFwerX</i>				
<i>AFwerX</i>	1	2020	4	2021

Note
 In FY 2022, all efforts and civilian manpower under Project 646030, AFWERX, were realigned from the Air Force Operations and Maintenance (O&M) appropriation, Budget Activity (BA-04), to now use Research, Development, Test, and Evaluation funds.