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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



Washington Headquarters Service

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Washington Headquarters Service • Budget Estimates FY 2019 • RDT&E Program

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	768	29,594	29,594		
Total Research, Development, Test & Evaluation	768	29,594	29,594		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

	FY 2018 Less Enacted Div B	FY 2018 P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Appropriation						
Research, Development, Test & Eval, DW				29,594		29,594
Total Research, Development, Test & Evaluation				29,594		29,594

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

01 Feb 2018

<u>Appropriation</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>
-----	-----	-----	-----
Research, Development, Test & Eval, DW	30,364		30,364
Total Research, Development, Test & Evaluation	30,364		30,364

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Summary Recap of Budget Activities					
Advanced Technology Development		29,594	29,594		
Management Support	768				
Total Research, Development, Test & Evaluation	768	29,594	29,594		
Summary Recap of FYDP Programs					
Research and Development		29,594	29,594		
Administration and Associated Activities	768				
Total Research, Development, Test & Evaluation	768	29,594	29,594		

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Department of Defense
 FY 2019 President's Budget
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 (Dollars in Thousands)

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	FY 2018 Less Enacted Div B	FY 2018 P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities						
Advanced Technology Development				29,594		29,594
Management Support						
Total Research, Development, Test & Evaluation				29,594		29,594
Summary Recap of FYDP Programs						
Research and Development				29,594		29,594
Administration and Associated Activities						
Total Research, Development, Test & Evaluation				29,594		29,594

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 (Dollars in Thousands)

01 Feb 2018

	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Summary Recap of Budget Activities			
Advanced Technology Development	29,364		29,364
Management Support	1,000		1,000
Total Research, Development, Test & Evaluation	30,364		30,364
Summary Recap of FYDP Programs			
Research and Development	30,364		30,364
Administration and Associated Activities			
Total Research, Development, Test & Evaluation	30,364		30,364

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 (Dollars in Thousands)

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Summary Recap of Budget Activities					
Advanced Technology Development		29,594	29,594		
Management Support	768				
Total Research, Development, Test & Evaluation	768	29,594	29,594		
Summary Recap of FYDP Programs					
Research and Development		29,594	29,594		
Administration and Associated Activities	768				
Total Research, Development, Test & Evaluation	768	29,594	29,594		

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FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

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	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities						
Advanced Technology Development				29,594		29,594
Management Support						
Total Research, Development, Test & Evaluation				29,594		29,594
Summary Recap of FYDP Programs						
Research and Development				29,594		29,594
Administration and Associated Activities						
Total Research, Development, Test & Evaluation				29,594		29,594

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Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Advanced Technology Development	29,364		29,364
Management Support	1,000		1,000
Total Research, Development, Test & Evaluation	30,364		30,364
Summary Recap of FYDP Programs			
Research and Development	30,364		30,364
Administration and Associated Activities			
Total Research, Development, Test & Evaluation	30,364		30,364

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Washington Headquarters Services	768	29,594	29,594		
Total Research, Development, Test & Evaluation	768	29,594	29,594		

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 (Dollars in Thousands)

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	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Appropriation					
Washington Headquarters Services			29,594		29,594
Total Research, Development, Test & Evaluation			29,594		29,594

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 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Washington Headquarters Services	30,364		30,364
Total Research, Development, Test & Evaluation	30,364		30,364

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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03		29,594	29,594			U
		Advanced Technology Development			29,594	29,594			
168	0606589D8W	Defense Digital Service (DDS) Development Support	06						U
186	0903235D8W	Joint Service Provider (JSP) Management Support	06	768					U
				768					
				768	29,594	29,594			
		Total Research, Development, Test & Eval, DW		768	29,594	29,594			

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Total Obligational Authority
(Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program	Element	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + e Emergency	S c
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)		03				29,594		29,594	U
		Advanced Technology Development						29,594		29,594	
168	0606589D8W	Defense Digital Service (DDS) Development Support		06							U
186	0903235D8W	Joint Service Provider (JSP) Management Support		06							U
Total Research, Development, Test & Eval, DW								29,594		29,594	

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Defense-Wide
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 (Dollars in Thousands)

01 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03	29,364		29,364	U
		Advanced Technology Development		29,364		29,364	
168	0606589D8W	Defense Digital Service (DDS) Development Support	06	1,000		1,000	U
186	0903235D8W	Joint Service Provider (JSP) Management Support	06	1,000		1,000	U
Total Research, Development, Test & Eval, DW				30,364		30,364	

R-119PB: FY 2019 President's Budget (Published Version), as of February 1, 2018 at 12:32:39

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Washington Headquarters Services
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 0400D Research, Development, Test & Eval, DW

R-119PB: FY 2019 President's Budget (Published Version), as of February 1, 2018 at 12:32:39

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Washington Headquarters Services
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Program				FY 2018 Less Enacted Div B		FY 2018 Total PB Requests*	FY 2018 Less Enacted DIV B	FY 2018 Remaining Req		
Line Element	No	Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Emergency	P.L.115-96*** MDDE + Ship Repairs	with CR Adj Base + OCO + Emergency**	with CR Adj Base + OCO + Emergency c	S
40	0603342D8W		Defense Innovation Unit Experimental (DIUx)	03				29,594	29,594	U
			Advanced Technology Development					29,594	29,594	
168	0606589D8W		Defense Digital Service (DDS) Development Support	06						U
186	0903235D8W		Joint Service Provider (JSP) Management Support	06						U
			Total Washington Headquarters Services					29,594	29,594	

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Washington Headquarters Services
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03	29,364		29,364	U
		Advanced Technology Development		29,364		29,364	
168	0606589D8W	Defense Digital Service (DDS) Development Support	06	1,000		1,000	U
186	0903235D8W	Joint Service Provider (JSP) Management Support	06	1,000		1,000	U
Total Washington Headquarters Services				30,364		30,364	

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Line #	Budget Activity	Program Element Number	Program Element Title	Page
40	03	0603342D8W	Defense Innovation Unit Experimental (DIUx).....	Volume 5 - 1

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
168	06	0606589D8W	Defense Digital Service (DDS).....	Volume 5 - 9
186	06	0903235D8W	Joint Service Provider (JSP).....	Volume 5 - 13

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Defense Digital Service (DDS)	0606589D8W	168	06.....	Volume 5 - 9
Defense Innovation Unit Experimental (DIUx)	0603342D8W	40	03.....	Volume 5 - 1
Joint Service Provider (JSP)	0903235D8W	186	06.....	Volume 5 - 13

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Washington Headquarters Service	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>					R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</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
Total Program Element	0.000	0.000	29.594	29.364	-	29.364	29.398	29.419	30.037	30.638	Continuing	Continuing
434: <i>DIUx</i>	0.000	0.000	29.594	29.364	-	29.364	29.398	29.419	30.037	30.638	Continuing	Continuing

Note

Defense Innovation Unit Experimental (DIUx) transfer from OSD (PE 0602230D8Z) to WHS (PE 0603342D8W)

The U.S. Department of Defense (DoD) relies on innovation to maintain our nation's ability to deter, and if need be, prevail in conflict. The Defense Innovation Unit Experimental (DIUx) increases the Department's access to leading-edge technologies and talent that reside in the commercial sector, with the ultimate goal of accelerating innovation into the hands of the warfighter. Working across the country, and in collaboration with allied international partners, DIUx is developing new ways of doing business, growing our defense industrial base to include "non-traditional" companies that had previously not collaborated with the military, working with traditional vendors in novel ways to increase efficiency, and challenging innovators to share their knowledge and expertise in support of our nation's defense.

A. Mission Description and Budget Item Justification

Defense Innovation Unit Experimental (DIUx) was established in April 2015 and DIUx 2.0 in May 2016.

DIUx mission is to accelerate innovation in the commercially-focused technology sector to the warfighter. Initially, DIUx was managed by the Under Secretary of Defense Acquisition, Technology and Logistics, (USD, AT&L) when it was established in July 2015. In May 2016, DIUx was placed under the control of the Secretary of Defense and administratively managed by Washington Headquarters Services (WHS) with a functional realignment of \$148.8 million across the FYDP to WHS.

The DIUx program will fund the development of novel leading-edge technologies emerging from high-tech companies that are not traditional defense contractors. An objective of this program is to obtain innovative ideas from industry that have low technology readiness and are of high priority to DoD leadership. Incoming proposals will be assessed to ensure alignment with the DoD's strategic objectives to increase and strengthen our nation's security.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Washington Headquarters Service	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603342D8W I <i>Defense Innovation Unit Experimental (DIUx)</i>
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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	29.594	29.364	-	29.364
Current President's Budget	0.000	29.594	29.364	-	29.364
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Initially, DIUx was managed by the Under Secretary of Defense Acquisition, Technology and Logistics, (USD, AT&L) when it was established in July 2015. In May 2016, DIUx was placed under the operational control of the Secretary of Defense and administratively managed by Washington Headquarters Services (WHS),with functional realignment of \$148.8 million across the FYDP Washington Headquarters Services (WHS) beginning in FY 2018.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603342D8W / Defense Innovation Unit Experimental (DIUx)				Project (Number/Name) 434 / DIUx			
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
434: DIUx	0.000	0.000	29.594	29.364	-	29.364	29.398	29.419	30.037	30.638	Continuing	Continuing

A. Mission Description and Budget Item Justification

DIUx mission is to accelerate innovation to the warfighter by leveraging commercial technology innovations. Initially, this program was managed by the Under Secretary of Defense Acquisition, Technology, and Logistics, (USD, AT&L) with functional realignment of \$148.8 million across the FYDP to Washington Headquarters Services (WHS) beginning in FY 2018. The DIUx program will fund the development of novel leading-edge technologies emerging from high-tech companies that are not traditional defense contractors. An objective of this program is to obtain innovative ideas from industry that have low technology readiness and are of high priority to DoD leadership. Incoming proposals will be assessed to ensure alignment with the DoD's strategic objectives to increase and strengthen our nation's security.

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

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<i>Title:</i> Defense Innovation Unit - Experimental (DIUx)	-	29.594	29.364	-	29.364
<i>FY 2018 Plans:</i> The Defense Innovation Unit Experimental (DIUx) is chartered to expand the Department's access to innovative companies and technologies that enable the development of leading-edge, asymmetric capabilities and help spur development of new ways to keep the United States on par or ahead of the nation's most advanced adversaries. The Secretary of Defense's strategic priorities includes improving the Departments lethality through multiple means to include the openness and willingness to evolve by adopting new ideas to ensure a better future for the Department and the Nation. One of the tenets of this priority is to expand the Department's ability to access leading edge technological innovations through commercial partnerships. The funding DIUx executes is critical as it incentivizes non-traditional defense sector companies to work with and invest in advancing DoD future capabilities.					
Some of the projects undertaken include: - Hardened Network Defense that provides warfighters improved network security by obscuring vital services and data, thereby significantly decreasing the ability of advancing cyber threats to map, attack or exploit tactical systems. - Command, Control, and Situational Awareness web-based software platform that supports user's ability to visualize relevant activities and operational metrics, collaboratively plan and approve defense activities, and monitor/manage subsequent. DIUx projects signal investment targets for venture capital opportunities. While					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service								Date: February 2018			
Appropriation/Budget Activity 0400 / 3				R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>			Project (Number/Name) 434 / <i>DIUx</i>				
B. Accomplishments/Planned Programs (\$ in Millions)											
				FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total			
<p>these are small when compared to the DoD total budget, the 3rd party investment multiplier they generate are without equal.</p> <p><i>FY 2019 Base Plans:</i> The U.S. Department of Defense relies on innovation to maintain our nation's ability to deter, and if need be, prevail in conflict. With outposts in Silicon Valley, Boston Massachusetts, and Austin Texas the Defense Innovation Unit Experimental (DIUx) serves as a bridge between those in the U.S. military executing on some of our nation's toughest security challenges and companies operating at the cutting edge of technology. DIUx is an experiment that continuously repeat how best to identify, contract, and prototype novel innovations through sources traditionally not available to the Department of Defense, with the ultimate goal of accelerating technology into the hands of warfighters and keep them on the cutting edge of technology.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> FY 2019 Plans Defense Innovation Unit Experimental (DIUx) is one of the Secretary of Defense's priorities in advancing technology, especially artificial intelligence, to help the U.S. Military become more lethal and capable of defending the nation. DIUx's objective is to rapidly solve the problems of our DoD customers and deploy those solutions. Accordingly, DIUx requirements are driven by DoD customers in the Services, Defense Agencies, and Combatant Commands. They come to DIUx with their most challenging and most compelling technological problems. DIUx works to solve challenges and issues for the Department in areas such as Artificial Intelligence and Machine Learning, Autonomy, Human Systems, Information Technology, and Space. DIUx specialized staff carry out the niche functions of its three teams: Venture, Foundry and Engagement. The Venture team identifies emerging commercial technology and explores its military applicability. The Foundry team works with technology that is still maturing and is not yet ready for production and the Engagement Team introduces entrepreneurs to military problems and the military to entrepreneurs.</p>											
Accomplishments/Planned Programs Subtotals				-	29.594	29.364	-	29.364			
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
• PE 0901583D8W: O&M	0.000	24.244	40.754	1.000	41.754	40.771	37.637	37.694	37.749	Continuing	Continuing
Remarks DIUX O&M mission support funding.											

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>
<u>D. Acquisition Strategy</u> N/A		
<u>E. Performance Metrics</u> N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Washington Headquarters Service		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>
<u>Remarks</u> The DIUx program will fund the development of novel leading-edge technologies emerging from high-tech companies that are not traditional defense contractors.		

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Washington Headquarters Service																Date: February 2018			
Appropriation/Budget Activity 0400 / 3								R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>								Project (Number/Name) 434 / <i>DIUx</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>DIUx Partnering</i>																												
Innovation Assessments																												
<i>Technology Assesment</i>																												
Innovation Prototyping																												
<i>Research and Development</i>																												
Delivery coordination																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Washington Headquarters Service			Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>DIUx Partnering</i>				
Innovation Assessments	4	2018	4	2023
<i>Technology Assessment</i>				
Innovation Prototyping	4	2019	4	2023
<i>Research and Development</i>				
Delivery coordination	3	2020	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Washington Headquarters Service **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0606589D8W / <i>Defense Digital Service (DDS)</i>
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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	0.000	1.000	-	1.000	1.000	1.000	1.000	1.000	Continuing	Continuing
281: <i>DDS</i>	-	0.000	0.000	1.000	-	1.000	1.000	1.000	1.000	1.000	Continuing	Continuing

Note

The Defense Digital Service (DDS) was launched in November 2015 and was formally chartered under DoD Directive 5105.87 in January 2017 in the Office of the Secretary of Defense (OSD) of the Department of Defense (DoD). Since that time, OSD has presented over 100 potential projects to DDS, some of which would benefit significantly from the enhanced prototyping capabilities of DDS. With appropriate funding, DDS leverage, its private sector expertise to fully support the build of a system prototype / proof-of-concept. RDT&E funding is required to support the DDS mission, which includes the ability to build software prototypes to prove out concepts for mission critical projects identified by the Department.

Ensuring that DDS has RDT&E capabilities will increase DoD's ability to leverage DDS's unique technical expertise to determine which private sector software development best practices and/or technology work best for the Department. Furthermore, the development and testing of DDS prototypes, and the insight gained, would significantly lower development costs and delivery times through traditional DoD methods.

A. Mission Description and Budget Item Justification

DDS was created to bring private sector software development best practices, talent, and technology to the Department's hardest software and technology problems. Since its launch in November 2015, DDS has project demands from OSD that have increased exponentially; some of those requests would benefit from robust prototyping / proof-of-concept capabilities by DDS teams. The former is dependent on RDT&E funding that supports the ability to acquire the most current technological solution and/or support from vendors well versed in the most advanced technological solutions.

The requested RDT&E funds will enable DDS to build prototypes and implement proof-of-concept tests for some key OSD projects. These projects will support missions in and out of theater, as well as long term goals of the department to modernize its offensive and defensive technological capabilities. DoD interest in leveraging DDS to operate in this area to solve hard and impossible problems is persistent. With appropriate funding, DDS can use the superior technical expertise of its staff, as well as ability to quickly deliver usable products to meet demand.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Washington Headquarters Service	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> / BA 6: <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0606589D8W / <i>Defense Digital Service (DDS)</i>
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B. Program Change Summary (\$ in Millions)	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	0.000	0.000	1.000	-	1.000
Current President's Budget	0.000	0.000	1.000	-	1.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0606589D8W / Defense Digital Service (DDS)				Project (Number/Name) 281 / DDS			
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
281: DDS	-	0.000	0.000	1.000	-	1.000	1.000	1.000	1.000	1.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Defense Digital Service (DDS) requests approximately \$1 million in Core RDT&E funding in FY2019 to build prototypes / proof-of-concepts for software and hardware development efforts. DDS will leverage its expertise in private industry best practices to develop prototypes that can be scaled to production to support the overall mission of DoD. This funding will help to ensure that DDS can capitalize on its unique ability to build, and/or advise customers on how to build, prototypes and proof-of-concepts using private sector best practices.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2017	FY 2018	FY 2019	
Title: Defense Digital Service (DDS)									0.000	-	1.000	
FY 2019 Plans: The U.S. Department of Defense needs on innovation to maintain our nation's ability to deter, and if need be, prevail in physical and technological conflict. With a team firmly rooted in the heart of the Pentagon, Defense Digital Service (DDS) serves as a nimble unit with the ability to quickly mobilize and tackle some the DoDs toughest technological challenges. DDS's approach leverages industry best practices to efficiently navigate policy, contracts, and tech blockers to reach working and scalable solutions to hardware and software problems. The ultimate goal of the team is to support DoD in finding and implementing relevant tech solutions to hard and/or impossible problems that when solved, increase the efficiency and effectiveness of the department in carrying out its mission to defend the United States and its domestic and overseas interests. Ultimately, the purpose and goal of the team is to ensure that solutions reach the hands of end users, including warfighters, in short timelines, so that compound problems from the existing problem sets do not persist.												
FY 2018 to FY 2019 Increase/Decrease Statement: Defense Digital Service Research and Development is one of the Secretary of Defense's top priorities with the intent of advancing and modernizing technology, especially software systems, critical to the successful implementation of a variety of department and warfighter missions. DDS requirements are driven by challenging technical problems identified by the Secretary of Defense where technology is failing the Department of Defense mission. These problems span across classified and unclassified problem spaces, and range from software development, piloting the use of commercial software as a replacement for antiquated government systems, and modernizing and refactoring broken systems. Some examples of current projects include: replacing the MEPCOM Integrated Resources System, reimagining the user interface and associated databases for the Defense Property System, devising a hard and software solution to counter Unmanned Aircraft Systems that attack warfighters in theater, and developing a novel and modern approach to network defense. Our team is comprised of digital experts with backgrounds in												

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service		Date: February 2018		
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0606589D8W / <i>Defense Digital Service (DDS)</i>	Project (Number/Name) 281 / <i>DDS</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
policy, contracts, design, and engineering who collectively use their private industry and federal government experience to identify solutions to problems and rapidly devise and implement solutions.				
Accomplishments/Planned Programs Subtotals		0.000	-	1.000
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks Defense Digital Service will build, or manage the build, of prototypes and proof-of-concepts that will solve hard and impossible technological problems in DoD.				
D. Acquisition Strategy N/A				
E. Performance Metrics NA				

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Washington Headquarters Service	Date: February 2018
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0903235D8W / Joint Service Provider (JSP)
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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	0.768	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
945: Miscellaneous - IT Initiative	0.000	0.768	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Washington Headquarters Services (WHS) Information Technology (IT) program provides ongoing research, test, and development and enhancement initiatives for the Office of the Secretary of Defense (OSD), OSD Principal Staff Assistants, and WHS Directorates. Ongoing initiatives include enterprise storage testing, enterprise performance and productivity analysis, enterprise/business applications development and enhancements, operational support enhancements, and information assurance testing and development.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.768	0.000	0.000	-	0.000
Current President's Budget	0.768	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

The JSP Program was transferred to DISA in FY 2018.

Defense Information System Agency (DISA) assumes operational control of the Joint Information Service Provider (JSP) in accordance with Deputy Secretary of Defense Directive Memorandum, Consolidation of Pentagon Information Technology Operations, 1 May 2015.

The FY 2017 funding remained with WHS and was executed by JSP.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0903235D8W / Joint Service Provider (JSP)				Project (Number/Name) 945 / Miscellaneous - IT Initiative			
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
945: Miscellaneous - IT Initiative	0.000	0.768	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

(+) The sum of all Prior Years is \$0.000 million less than the represented total due to several projects ending

A. Mission Description and Budget Item Justification

P945 - Miscellaneous IT Initiative - The WHS provides various IT support for the WHS/OSD to align processes and information technology that will enable mission accomplishment.

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

	FY 2017	FY 2018	FY 2019
Title: Joint Service Provider (JSP)	0.768	-	-
Accomplishments/Planned Programs Subtotals	0.768	-	-

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

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

FY 2017: To achieve a 15% reduction in the time to deploy modifications, upgrades, and capabilities to customers.