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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army										Date: March 2019		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 2: Applied Research					R-1 Program Element (Number/Name) PE 0602785A / Manpower/Personnel/Training Technology							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	19.791	21.847	20.873	-	20.873	21.268	19.232	19.159	19.382	0.000	141.552
790: Personnel Performance & Training Technology	-	19.791	21.847	20.873	-	20.873	21.268	19.232	19.159	19.382	0.000	141.552

## A. Mission Description and Budget Item Justification

This Program Element (PE) designs and validates applied behavioral and social science research to enhance the Soldier Lifecycle (e.g., selection, assignment, training, and leader development) and human relations (e.g., unit cohesion). This PE develops new personnel measures and methods that more fully assess potential and predict performance, behavior, attitudes, and resilience. These technologies also provide innovative and effective Talent Management methods to optimize individual and team performance to ensure the Army can meet mission requirements in uncertain and complex environments. This PE develops new performance measures and metrics for individuals and units, designs innovative training methods, and conducts scientific assessments to inform Human Capital policy and programs. Research in this PE will result in effective non-materiel solutions to help the Army adjust to changes in force size and structure, a variety of mission demands and contexts, challenges in human relations, and budgetary constraints.

Work in this PE complements PE 0603007A (Manpower, Personnel and Training Advanced Technology).

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas, the Army Vision, the Army's Talent Management Strategy, and the Army Modernization Strategy.

Work is performed by the Army Research Institute (ARI) for the Behavioral and Social Sciences at Fort Belvoir, VA.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	20.216	21.862	23.651	-	23.651
Current President's Budget	19.791	21.847	20.873	-	20.873
Total Adjustments	-0.425	-0.015	-2.778	-	-2.778
• Congressional General Reductions	-0.009	-0.015			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.416	-			
• Adjustments to Budget Years	-	-	-2.778	-	-2.778

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Army										Date: March 2019		
Appropriation/Budget Activity 2040 / 2					R-1 Program Element (Number/Name) PE 0602785A / Manpower/Personnel/ Training Technology				Project (Number/Name) 790 / Personnel Performance & Training Technology			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
790: Personnel Performance & Training Technology	-	19.791	21.847	20.873	-	20.873	21.268	19.232	19.159	19.382	0.000	141.552

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

This Project conducts applied behavioral and social science research to enhance the Soldier Lifecycle (e.g., selection, assignment, training, leader development) and human relations (e.g., unit cohesion). This Project develops new personnel measures and methods that more fully assess potential and predict performance, behavior, attitudes, and resilience. These technologies also provide innovative and effective Talent Management methods to optimize individual and team performance to ensure the Army can meet mission requirements in uncertain and complex environments. This Project develops new performance measures and metrics for individuals and units, designs innovative training methods, and conducts scientific assessments to inform Human Capital policy and programs. Research in this Project will result in effective non-materiel solutions to help the Army adjust to changes in force size and structure, a variety of mission demands and contexts, challenges in human relations, and budgetary constraints.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas, the Army Vision, the Army's Talent Management Strategy, Army Human Capital Strategy, and the Army Modernization Strategy.

This Project is renamed from Personnel Performance and Training Technology to reflect the change in work that supports Army priorities.

Work is performed by the U.S. Army Research Institute (ARI) for the Behavioral and Social Sciences in Fort Belvoir, VA.

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Talent Assessment and Development	8.750	12.500	20.873
<b>Description:</b> Conduct applied research that provides the Army with improved prediction and modeling of potential performance, behaviors, attitudes, and resilience of Soldiers, as well as an improved ability to recruit and sustain an effective career force.			
<b>FY 2019 Plans:</b> Conduct research to develop a vocational interest inventory for increased prediction and selection of individual assignments and performance within select critical Military Occupational Specialties (e.g. cyberwarfare); conduct research for the application of non-cognitive measures to inform branching choices for cadets to support sustainment of professional military careers and reduce Soldier attrition costs; conduct research in big data applications to develop automatically generated test items for personnel assessment.			
<b>FY 2020 Plans:</b>			

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
<p>Will conduct research to develop non-cognitive assessments for in-service assignments and initial job-choice for enlisted and officer candidates (e.g., cyber occupations) and other military occupational specialties (MOS) &amp; Branches; will conduct research to develop outcome measures for more comprehensive assessment of the effectiveness of personnel and training programs/policy; will conduct research to develop methods for assessing and developing complex leader competencies to perform effectively in multi-domain operations (e.g., systems and strategic thinking).</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> In FY 2020, funding in 0602785A/ Project 790 is consolidated into this effort and accelerated in support of Army Modernization efforts.</p>			
<p><b>Title:</b> Team-Based Personnel Assignment</p> <p><b>Description:</b> This effort combines and refocuses previous efforts titled "Personnel Performance and Readiness" and "Unit Performance and Cohesion." This effort conducts research to create scientifically valid models, tools and techniques to assign individuals to teams to optimize team effectiveness in-garrison and in future operational environments. Conduct research to create science-based methods to rapidly build team cohesion and collective performance.</p> <p><b>FY 2019 Plans:</b> Conduct research to develop methods for assessing and developing complex leader competencies to perform effectively in multi-domain operations (e.g., systems and strategic thinking).</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> In FY 2020, funding from this effort is realigned into "Talent Assessment and Development" research effort within Project 790 in support of Army Modernization efforts. .</p>		7.400	3.757
<p><b>Title:</b> Unit Performance and Cohesion</p> <p><b>Description:</b> This effort was combined in Team-Based Personnel Assignment effort.</p> <p><b>FY 2019 Plans:</b> Conduct research to develop empirically-validated climate assessments based on objective behaviors (e.g., behavior checklists, unobtrusive measures) that efficiently and accurately assess key aspects of command climate; conduct research to develop methods to assess cohesion in non-traditional teams (e.g., dispersed, diverse, new tasks/missions).</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> This effort ends in FY 2019.</p>		3.641	5.100
<b>Title:</b> FY 2019 SBIR / STTR Transfer		-	0.490

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
<b>Description:</b> FY 2019 SBIR / STTR Transfer			
<b>FY 2019 Plans:</b> FY 2019 SBIR / STTR Transfer			
<b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> FY 2019 SBIR / STTR Transfer			
<b>Accomplishments/Planned Programs Subtotals</b>		19.791	21.847
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
N/A			
<b>E. Performance Metrics</b>			
N/A			