Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army											Date: February 2018	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*							
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	-	29.905	33.934	29.050	-	29.050	37.778	38.489	39.257	39.946	0.000	248.359
720: *Tech Info Func Actv*	-	6.095	5.866	4.780	-	4.780	5.295	5.405	5.563	5.670	0.000	38.674
727: *Tech Info Activities*	-	8.346	11.535	9.132	-	9.132	10.287	10.489	10.809	11.023	0.000	71.621
730: *Pers & Trng Analys Act*	-	1.965	2.232	1.346	-	1.346	2.244	2.291	2.354	2.401	0.000	14.833
731: *Army High Performance Computing Centers*	-	4.459	4.535	4.595	-	4.595	4.685	4.785	4.906	5.002	0.000	32.967
733: *Acquisition Tech Act*	-	3.500	3.760	3.529	-	3.529	9.278	9.402	9.345	9.470	0.000	48.284
C16: *FAST*	-	1.535	1.644	1.630	-	1.630	1.654	1.691	1.740	1.773	0.000	11.667
C18: *BAST*	-	0.959	1.061	0.895	-	0.895	1.076	1.096	1.129	1.151	0.000	7.367
DW3: *Army Geospatial Enterprise Implementation*	-	3.046	3.301	3.143	-	3.143	3.259	3.330	3.411	3.456	0.000	22.946

A. Mission Description and Budget Item Justification

This Program Element (PE) supports upgrading the accuracy, timeliness, availability, and accessibility of scientific, technical, and management information at all levels of the Army Research and Development (R&D) community. Management of this information is critical to achieve the goals established by the Army's Senior Leadership. Use of accurate and timely technical information is essential to successfully meeting the milestones required on the path to the future force, allowing Army Science and Technology (S&T) leadership to refine investment strategy and quickly react to emerging opportunities and issues. This PE includes initiatives to improve information derivation, storage, access, display, validation, transmission, distribution, and interpretation; to develop and enhance a single business model for Army S&T knowledge management information technology; to provide for Independent Review Team analysis of technology maturity as part of the Technology Area Readiness Assessment as required by Department of Defense (DoD) Instruction 5000.2 dated May 12, 2003 as well as the Army Science Board (ASB) (Projects 720 and 727). This PE addresses the need to increase the competitiveness and availability of scientific, engineering, and technical skills in the DoD and National workforce through outreach programs aimed at middle school through college students and teachers. By providing direct working experience for these students in Army laboratories, the PE expose these students to the working world of science and engineering (Project 729). Project 730 provides funding for assessments in attitudes and opinions, longitudinal trends in Soldier and leader perceptions, and emerging issues to provide senior Army leaders with information on Soldiers' perceptions to inform personnel policy and program decision-making concerning manpower, personnel, and training issues. Project 731 provides funding for support for Army high performance computing centers. Project 733 provides funding for improvements to the Army's acquisition process, while Project C16 supports combatant commanders and major Army commands by providing science advisors to address scientific and technical issues and by providing engineering teams to solve field Army technical problems. Finally, this PE funds studies by the Board on Army Science and Technology (BAST) (Project C18). Coordination of this PE with the other Services is achieved through inter-service working groups.

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army	Date: February 2018
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*

Work in this PE is performed by the Research, Development, and Engineering Command (RDECOM), Aberdeen Proving Ground, MD, the Army Research Institute for the Behavioral and Social Sciences (ARI), Ft. Belvoir, VA, the Army Corps of Engineers' Engineer Research and Development Center (ERDC), Vicksburg, MS, Medical Research and Materiel Command (MRMC), Ft. Detrick, MD, Space and Missile Defense Command (SMDC), Huntsville, AL, and the Information Management Office, Arlington, VA.

B. Program Change Summary ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	33.323	33.934	31.731	-	31.731
Current President's Budget	29.905	33.934	29.050	-	29.050
Total Adjustments	-3.418	0.000	-2.681	-	-2.681
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.330	-			
• SBIR/STTR Transfer	-1.074	-			
• Adjustments to Budget Years	-	-	-2.681	-	-2.681
• FFRDC Transfer	-0.014	-	-	-	-

Change Summary Explanation

Fiscal Year 2017 value represents $2.33 Million in Below Threshold Reprogramming along with required Small Business Innovation Research reductions.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) 720 / *Tech Info Func Actv*	

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
720: *Tech Info Func Actv*	-	6.095	5.866	4.780	-	4.780	5.295	5.405	5.563	5.670	0.000	38.674
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides funding for technology transfer activities to support acquisition, storage, and utilization of technical information for both military and domestic applications. Effective exploitation of science and technology (S&T) information is critical to achieving the goals established by senior Army leadership. Activities include: Army support for Federal Laboratory Consortium (FLC) as required by Public Law; the Army Science Board; the Army Science Conference; S&T database management efforts; and administration of the Army's Small Business Innovation Research (SBIR) and Small Business Technology Transfer Program (STTR) in accordance with the Small Business Innovation Development Act of 1982, the Small Business Research and Development Enhancement Act of 1992 and subsequent reauthorizing legislation. Technology transfer activities make technical information available to both the public and private sectors to reduce duplication in Research and Development programs and to increase competitiveness in the United States (US) business community. Database management efforts support development of decision aids, databases, and automation support for the management and execution of the Army Research, Development, Test and Evaluation (RDTE) appropriation. In addition, this Project provides funding for patent legal expenses and fees for all United States (U.S.) Army Research, Development, and Engineering Command (RDECOM) subordinate commands and laboratories, as required by the Omnibus Budget Reconciliation Act.

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

Work is performed by RDECOM, Aberdeen Proving Ground, MD and the US Army Research Laboratory (ARL), Adelphi, MD.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Provide Army Funding Support for Federal Laboratory Consortium as Required by Public Law 104-113	0.256	0.260	0.261
Description: Public Law 104-113 requires the Army to provide funding for the federal laboratory consortium which is a network of federal agencies that provide a platform where technologies can be strengthened and promoted to return dividends to our economy.			
FY 2018 Plans: Providing Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.			
FY 2019 Plans: Will provide Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.			
FY 2018 to FY 2019 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 720 / *Tech Info Func Actv*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Adjustment due to inflation.			
Title: Administrative Support for the Army's SBIR and STTR Programs	1.283	1.266	1.278
Description: Army SBIR and Army STTR programs. In 1982, Congress, through the Small Business Innovation Development Act (P.L. 97-219) established the SBIR program to foster the involvement of US based small businesses in federal research and development (R&D). The SBIR program is designed to increase the participation of small, high-technology firms in the federal R&D endeavor and give driven businesses the opportunity to provide innovative R&D solutions in response to critical Army needs. The STTR program expands the public/private sector partnership to include the joint venture opportunities for small business and the nation's premier nonprofit research institutions. The most important role of the STTR program is to foster the innovation necessary to meet the nation's scientific and technological challenges in the 21st century. The SBIR/STTR support services include program and technical advisory support services on a broad level. The Army SBIR/STTR Program Management Office mission requires synergized, integrated business solutions that concentrates on small business technological advances, and eliminates redundancy in a codified and consistent method that reduces confusion and ambiguity for the thousands of small businesses that participate in the SBIR and STTR programs. ***FY 2018 Plans:*** Providing the Army SBIR/STTR Program Offices with the resources necessary to execute Congressionally-mandated programs. The Army SBIR/STTR Program Offices procure program management and technical services required to support the programs. The support services include a broad range of program and technical assistance services such as programming; database support; drafting of letters, reports, newsletters, briefings, presentation materials and correspondence; analyses; documentation for record keeping and reporting; helpdesk; and web portal development and support. The services assist the Program Offices in planning, coordinating, implementing, and orchestrating SBIR/STTR functions to include current and new approaches, processes and procedures as required by United States Code, Title 15, Section 638, Fiscal Year 2012 National Defense Authorization Act, Public Laws 112-81, and in Public Laws 97-219, 99-443, 102-564 and 106-554. ***FY 2019 Plans:*** Will provide the Army SBIR/STTR Program Offices with the resources necessary to execute Congressionally-mandated programs. The Army SBIR/STTR Program Offices will procure program management and technical services required to support the programs. The support services will include a broad range of program and technical assistance services such as programming; database support; drafting of letters, reports, newsletters, briefings, presentation materials and correspondence; analyses; documentation for record keeping and reporting; helpdesk; and web portal development and support. The services will assist the Program Offices in planning, coordinating, implementing, and orchestrating SBIR/STTR functions to include current and new			

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 720 / *Tech Info Func Actv*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
approaches, processes and procedures as required by United States Code, Title 15, Section 638, Fiscal Year 2012 National Defense Authorization Act, Public Laws 112-81, and in Public Laws 97-219, 99-443, 102-564 and 106-554. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Adjustment due to inflation.			
Title: Provide Funding for Patent Fees and Patent Legal Expenses for U.S. Army Materiel Command (AMC) Commands and Laboratories ***Description:*** The Army Research Laboratory turns high-value Army S&T investments into patented technologies in an effort to convert research into jobs and innovations for the Warfighter. The funded efforts are used for patent fees and legal expenses required for the patent application process. ***FY 2018 Plans:*** Providing funding for patent fees and patent legal expenses for AMC commands and laboratories. ***FY 2019 Plans:*** Will provide funding for patent fees and patent legal expenses for AMC commands and laboratories. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Change in requirements and scope of the effort.	1.069	1.069	0.974
Title: Provide Funding for S&T Strategic Planning and Support ***Description:*** S&T strategic planning and support is a critical component to the overall Army mission as it reaffirms Army leadership guidance, reinforces commitment to basic research, and leverages a landscape of game-changing technologies that can provide future innovations and capabilities to the Warfighter. ***FY 2018 Plans:*** Providing funding for S&T Strategic Planning and Support. ***FY 2019 Plans:*** Will provide funding for S&T Strategic Planning and Support. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Change in requirements and scope of the effort.	0.326	0.332	0.277
Title: Administer S&T Database Computer Engineering Support Contract and Support RDECOM Databases S&T Management Support	3.161	2.939	1.990

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 720 / *Tech Info Func Actv*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Description: The S&T database computer engineering support contract provides management support of RDECOM's databases as well as supports the development of the Army Research Laboratory S&T information activities to include campaign plans envisioned to lead to enhanced land power capabilities. ***FY 2018 Plans:*** Administering S&T database computer engineering support contract and support RDECOM databases S&T management support. ***FY 2019 Plans:*** Will administer S&T database computer engineering support contract and support RDECOM databases S&T management support. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Change in requirements and scope of the effort.			
Accomplishments/Planned Programs Subtotals	6.095	5.866	4.780

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) 727 / *Tech Info Activities*	

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
727: *Tech Info Activities*	-	8.346	11.535	9.132	-	9.132	10.287	10.489	10.809	11.023	0.000	71.621
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds the development of decision aids, databases, and automation support for the management and execution of the Army RDTE Appropriation. It includes the hardware, software, and contractor support required to develop and implement a set of management decision aids, databases, and hardware/software tools to support technical and budgetary decisions at the Office of the Secretary of Defense (OSD) and Department of the Army (DA). Most of the efforts in this project are on-going activities to support Army Research, Development, and Acquisition programs. Effective exploitation of Science and Technology (S&T) information is critical to achieving the goals established by Senior Army Leadership for the future force. Funding in this program supports Independent Review Team analysis of technology maturity as part of Technology Readiness Assessments as required by Department of Defense Instruction (DoDI) 5000.2.

The cited work is consistent with the Assistant Secreatary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work in this project is performed by the Office of the Assistant Secretary of the Army, Acquisition, Logistics and Technology, The Pentagon, Washington, DC.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Conduct and support S&T program portfolio assessments and analysis.	1.656	1.770	1.216
Description: Support identification, development and demonstration of technology options that inform and enable effective and affordable capabilities for the Soldier Providing Soldiers with the technology to win. Support Air, Ground Maneuver and Lethality Portfolio Directors, responding to scientific, technical and programmatic challenges. Support Independent Review Team analysis of technology maturity as part of Technology Readiness Assessments as required by DoDI 5000.2. Serve as Office of the Deputy Assistant Secretary of the Army, Research and Technology (DASA(R&T)) central point of contact for Systems Red Teaming and Technology Vulnerability Assessments.			
FY 2018 Plans: Track, manage and provide programmatic support for applied research and advanced technology development efforts in vulnerability assessments; act as the S&T Subject Matter Experts (SMEs) provide Portfolio leads what is forecasted for science and technology ?outputs? to align with Programs of Record (PoR); provide ODASA (R&T) summary briefing in the SPAR, ensure tight alignment and coupling to existing PoRs and identifying where misalignment between Portfolio technology projections/ timelines and/or emerging technology options are not yet reflected at the PoR level. Identify technology for effective and affordable			

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 727 / *Tech Info Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
capabilities in the S&T portfolios: Basic Research, Innovation Enablers, Medical, Soldier/Squad, Command, Communications and Command, Control, Communications, Computers and Intelligence (C3I), Air, Lethality and Ground Maneuver. ***FY 2019 Plans:*** Will track, manage and provide programmatic support for applied research and advanced technology development efforts in vulnerability assessments; act as the S&T SMEs provide Portfolio leads what is forecasted for science and technology ? outputs? to align with Programs of Record; provide ODASA (R&T) summary briefing in the SPAR; ensure tight alignment and coupling to existing PoRs and identifying where misalignment between Portfolio technology projections/timelines and/or emerging technology options are not yet reflected at the PoR level. Identify technology for effective and affordable capabilities in the S&T portfolios: Basic Research, Innovation Enablers, Medical, Soldier/Squad, Command, Communications and Command, Control, Communications, Computers and Intelligence (C3I), Air, Lethality and Ground Maneuver. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Compliance and continuity.			
Title: Support Army S&T strategic planning, analysis, and prioritization. ***Description:*** Coordinate efforts with and across the Army S&T portfolios; manage proposal nomination and selection process; track and provide oversight of ongoing efforts; recommend resolutions/prioritization in the event of conflicting requirements and/or resource constraints; support the full spectrum of Planning, Programming and Budget Execution (PPBE) as it relates to the Army S&T Program. Provide senior level technical and analytical support for the Joint Capability Technology Demonstration (JCTD) program and Technology Maturation Initiative (TMI) by assisting with investment analysis, strategies and oversight. Provide financial management recommendations and insights with regards to JCTDs, TMI, Manufacturing Technology (ManTech) and DMIs. Provide technical support and database administration of the Army Science and Technology Management Information System (ASTMIS) database. A variety of scientific and technical taxonomies applied at the task level allow responsive reporting on S&T programs to Congressional, OSD and Army leadership. ***FY 2018 Plans:*** Develop strategic analyses to look across the S&T portfolios and provide recommendations to the Director of Integration for S&T efficiencies and collaborative opportunities; support ODASA(R&T) lead for future force; continue to coordinate efforts with and across the Army S&T portfolios; support the Program Decision Memorandum (PDM) process, tasks and guidance for Equipping Program Evaluation Group (PEG); develop prioritized decrement lists and recommend alternatives for a balanced portfolio; and support the plan and execution for the ASTAG, the ASTWG and the WTC. ***FY 2019 Plans:*** Will develop strategic analyses to look across the S&T portfolios and provide recommendations to the Director of Integration for S&T efficiencies and collaborative opportunities; support ODASA(R&T) lead for future force; continue to coordinate efforts	4.764	6.689	5.587

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 727 / *Tech Info Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
with and across the Army S&T portfolios; support the PDM process, tasks and guidance for Equipping PEG; develop prioritized decrement lists and recommend alternatives for a balanced portfolio; and support the plan and execution for the ASTAG, the ASTWG and the WTC. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Compliance and continuity.			
Title: Provide funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions. ***Description:*** Coordination and alignment with Programs of Record. Demonstrate technical feasibility at system and subsystem level. As path for technology spirals to acquisition, ensure a rapid insertion of new technology. ***FY 2018 Plans:*** Support the S&T investment strategy for the entire Army; provide options for the future across to sustain overmatch against adversaries and create opportunities to meet new challenges and fight in new ways; continue Independent Review Team (IPT) analysis of technology maturity as part of Technology Readiness Assessments as required by DoDI 5000.2; and act as the central point of contact for Systems Red Teaming and Technology Vulnerability Assessments. ***FY 2019 Plans:*** Will support the S&T investment strategy for the entire Army; provide options for the future across to sustain overmatch against adversaries and create opportunities to meet new challenges and fight in new ways; continue Independent Review Team (IPT) analysis of technology maturity as part of Technology Readiness Assessments as required by DoDI 5000.2; and act as the central point of contact for Systems Red Teaming and Technology Vulnerability Assessments. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Compliance and continuity.	1.199	1.967	1.318
Title: Provide Army support to Assistant Secretary of Defense for Research and Engineering Executive Staff for Department of Defense (DoD) wide Science and Technology oversight. ***Description:*** Support for Army engagement in DoD/Assistant Secretary of Defense (Research & Engineering) (ASD(R&E)) and cross agency Science Technology Engineering and Mathematics (STEM) and diversity initiatives, including support for historically black colleges and universities/ minority-serving institutions (HBCU/MSI) actions. provide subject matter expert support for educational and diversity outreach activities, to include targeted research, analysis, and studies in support of strategic planning, prioritizing, investment strategy and review criteria for the Army Educational Outreach Program (AEOP). ***FY 2018 Plans:***	0.727	1.109	1.011

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** *727 / Tech Info Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Participate in Defense Advanced Research Projects Agency (DARPA) engagements and awareness of DARPA Programs with links to Army S&T, and support Army S&T Engagements with DARPA Program Managers and Leadership; and support execution of ongoing programs, events and functional responsibilities, effectively communicating with all Army stakeholders and partners including other services, OSD, industry and academia. ***FY 2019 Plans:*** Will participate in Defense Advanced Research Projects Agency (DARPA) engagements and awareness of DARPA Programs with links to Army S&T, and support Army S&T Engagements with DARPA Program Managers and Leadership; and support execution of ongoing programs, events and functional responsibilities, effectively communicating with all Army stakeholders and partners including other services, OSD, industry and academia. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Compliance and continuity.			
Accomplishments/Planned Programs Subtotals	8.346	11.535	9.132

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) 730 / *Pers & Trng Analys Act*	

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
730: *Pers & Trng Analys Act*	-	1.965	2.232	1.346	-	1.346	2.244	2.291	2.354	2.401	0.000	14.833
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds the Army's behavioral and social science research in attitudes and opinions assessment, longitudinal trends in Soldier and leader perceptions, and emerging issues. The research provides a unique capability to address a number of issues that directly or indirectly affect Soldier and unit performance and readiness, such as identifying the impact of personnel policies on Soldier outcomes and identifying emerging and potential personnel challenges. Requirements for this research is solicited on a recurring basis from the Secretary of the Army (SA), Chief of Staff of the Army (CSA), Army Deputy Chief of Staff (DCS G-1), and the Assistant Secretary of the Army for Manpower and Reserve Affairs (ASA(M&RA)).

Work in this Project is managed by the United States Army Research Institute for the Behavioral and Social Sciences (ARI), Ft. Belvoir, VA.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: PERS & TRNG ANALYS ACT	1.965	2.232	1.346
Description: This effort conducts attitude and opinion research to identify longitudinal trends and emerging issues to inform senior Army leader decision making and shape ARI's long-range S&T program. ***FY 2018 Plans:*** Conduct research on critical issues identified by the SA, CSA, DCS G-1, and ASA(M&RA). ***FY 2019 Plans:*** Will conduct research on critical issues identified by the SA, CSA, DCS G-1, and ASA(M&RA). ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Change in requirements and scope of effort.			
Accomplishments/Planned Programs Subtotals	1.965	2.232	1.346

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 730 / *Pers & Trng Analys Act*

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) 731 / *Army High Performance Computing Centers*	

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
731: *Army High Performance Computing Centers*	-	4.459	4.535	4.595	-	4.595	4.685	4.785	4.906	5.002	0.000	32.967
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides funding for the high performance computing (HPC) research environment, research, education, outreach, and sustainment infrastructure sustainment, and outreach support associated with the Army High Performance Computing Centers at the U.S. Army Research Laboratory (ARL) and the U.S Army Tank and Automotive Research, Development, and Engineering Center (TARDEC). The Army High Performance Computing Centers provide high fidelity modeling, simulation, and analysis of materials, systems, and operational constructs. The Centers work with researchers at Army laboratories and research, development, and engineering centers to explore new HPC computing environments, algorithms in the computational sciences to address critical technology issues in computational research areas.

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work is performed by ARL, Aberdeen Proving Ground, MD and TARDEC, Warren, MI.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Sustain the High Performance Computing Environment and Infrastructure in Support of the US Army Research Laboratory (ARL)	4.259	4.535	4.595
Description: The HPC center provides levels of computational capacity to Army's tactical operational realms and provide innovative HPC capabilities to increase the effectiveness of Army Soldiers around the world. Algorithm design and software engineering approaches are investigated to effectively partition and use binary processing cores to reduce time to solution for Army-relevant problems. Factors such as performance, portability, and power will be considered in conjunction with developing new models to quantify computing capabilities in hybrid systems to facilitate algorithm signature mapping to available resources.			
FY 2018 Plans: Sustain HPC environment and infrastructure for advanced heterogeneous computing architecture including data sciences computing architectures, special access systems infrastructure, programmable HPC Networking infrastructure, and ARL computational sciences Open Campus systems; and sustain software so that the software can take advantage of advanced			

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 731 / *Army High Performance Computing Centers*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
computing architectures, HPC networking, and visualization that are mission critical for Army S&E and Test & Evaluation (T&E) applications. ***FY 2019 Plans:*** Will sustain HPC environment and infrastructure for advanced heterogeneous computing architecture including data sciences computing architectures, special access systems infrastructure, programmable HPC Networking infrastructure, and ARL computational sciences Open Campus systems; and sustain software so that the software can take advantage of advanced computing architectures, HPC networking, and visualization that are mission critical for Army S&E and T&E applications. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Adjustment due to inflation.			
Title: Sustain the High Performance Computing Environment and Infrastructure in Support of the US Army Tank and Automotive Research Development and Engineering Center ***Description:*** The HPC center provides levels of computational capacity to Army's tactical operational realms and provide innovative HPC capabilities to increase the effectiveness of Army Soldiers around the world. Tactical HPC will be possible only through a combined effort of advanced computing architectures research, mathematical models and techniques to network and manage deployed friendly computing devices.	0.200	-	-
Accomplishments/Planned Programs Subtotals	4.459	4.535	4.595

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) 733 / *Acquisition Tech Act*	

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
733: *Acquisition Tech Act*	-	3.500	3.760	3.529	-	3.529	9.278	9.402	9.345	9.470	0.000	48.284
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds improvements to the Army's acquisition process by applying decision support and expert information systems, and by supporting analysis and evaluation of alternative acquisition strategies using techniques such as value-added analysis and analysis-of-alternatives. This Project provides the environment for the analysis and evaluation of new information technologies, concepts, and applications for integrated management activities and support dynamic Army acquisition technology requirements. This Project also supports critical analyses for Army leadership in support of Army Transformation. These analyses are used by leadership in making acquisition, procurement, and logistics decisions in order to provide quality equipment and procedures to the Soldiers.

The cited work is consistent with the Assistant Secreatary of Defense for Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the Army Acquisition Support Center, Ft. Belvoir, VA.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: ACQUISITION TECH ACT	3.500	3.760	3.529
Description: Distribute and beta test application programs and user interface utilities for executive level information systems that offer Standard Query Language services to Army Acquisition Corps corporate and global databases. Analyze acquisition program financial programming and budgeting requirements. Continue development of Weapon Systems Handbook, long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis.			
FY 2018 Plans: Distribute and beta test application programs and user interface utilities for executive level information systems that offer Standard Query Language services to Army Acquisition Corps corporate and global databases; analyze acquisition program financial programming and budgeting requirements; and continue development of long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis.			
FY 2019 Plans: Will distribute and beta test application programs and user interface utilities for executive level information systems that offer Standard Query Language services to Army Acquisition Corps corporate and global databases; analyze acquisition program			

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** 733 / *Acquisition Tech Act*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
financial programming and budgeting requirements; and continue development of long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Change in requirements and scope of effort.			
Accomplishments/Planned Programs Subtotals	3.500	3.760	3.529

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) C16 / *FAST*	

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
C16: *FAST*	-	1.535	1.644	1.630	-	1.630	1.654	1.691	1.740	1.773	0.000	11.667
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides support for the Field Assistance in Science and Technology (FAST) program. The FAST program provides Science Advisors, recruited from Army Materiel Command (AMC) headquarters and all AMC Major Subordinate Commands (MSC) to serve combatant commands and major commands worldwide. FAST tours of duty provide significant professional growth opportunities for the Army's scientists and engineers and enable them to focus AMC resources on rapidly identifying and solving field technical problems that enable the improvement of readiness, safety, training, and reduce operations and support (O&S) costs. The FAST activity is supported by Quick Reaction Coordinators within the engineering centers. The FAST program recoups many times its cost in O&S savings. FAST also provides emerging technology demonstration opportunities to the engineering centers an Annual Program Review to facilitate sharing of lessons learned between science advisors at combatant commands, assists Combatant Commanders (COCOMS) with their annual Science and Technology Conferences. FAST also maintains close coordination with the Navy Science Advisor Program (Naval Fleet Forces Technology Integration Office). FAST supports warfighters in contingency operations with embedded Science and Technology Assistance Teams (STATs) as well as Science and Technology Acquisition Corps Advisors (STACAs).

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

Work in this project is performed by: AMC, Redstone Arsenal, AL; and Research, Development and Engineering Command (RDECOM), Aberdeen Proving Ground, MD.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Respond to combatant commanders worldwide with technological solutions.	1.535	1.644	1.630
Description: This activity: responds to combatant commanders worldwide with technological solutions to urgent materiel problems they identify; deploys science advisors with U.S. Task Forces in support of combatant commanders; executes annual Program Review; provides additional support needed to participate in combatant commander exercises; responds to corresponding Warfighter requests for information (RFIs), providing project support to offset capability gaps identified by the Warfighter.			
FY 2018 Plans: Respond to combatant commanders worldwide with technological solutions to urgent materiel problems they identify; deploy science advisors with U.S. Task Forces in support of combatant commanders; execute annual Program Review; provide			

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** C16 / *FAST*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
additional support needed to participate in combatant commander exercises; respond to corresponding Warfighter RFI's will provide project support to offset capability gaps identified by the Warfighter. ***FY 2019 Plans:*** Will respond to combatant commanders worldwide with technological solutions to urgent materiel problems they identify; deploy science advisors with U.S. Task Forces in support of combatant commanders; execute annual Program Review; provide additional support needed to participate in combatant commander exercises; respond to corresponding Warfighter RFI's will provide project support to offset capability gaps identified by the Warfighter. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Change in requirements and scope of effort.			
Accomplishments/Planned Programs Subtotals	1.535	1.644	1.630

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) C18 / *BAST*	

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
C18: *BAST*	-	0.959	1.061	0.895	-	0.895	1.076	1.096	1.129	1.151	0.000	7.367
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds the Board on Army Science and Technology (BAST). The BAST functions under the auspices of the National Research Council (NRC) and provides an external, independent, and objective source of advice to the Army. The BAST serves as a convening authority for the discussion of science and technology issues of importance to the Army and oversees independent Army-related studies conducted by the National Academies. Working in close coordination with the Army, the BAST helps define problems, brings together experts to study these problems, and provides recommendations. Committees are assembled in accordance with established NRC procedures and BAST studies often take 12 months or more to conclude.

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work in this Project is executed extramurally by the U.S. Army Research Laboratory, Army Research Office (ARO), Research Triangle Park, NC.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Provide Studies and Conduct Periodic Meetings to Help Identify, Assess, and Recommend Emerging Opportunities in Science and Technology (S&T) Fields Applicable to the United States (U.S.) Army.	0.959	1.061	0.895
Description: To acquire a greater understanding of emerging technology opportunities that support a plethora of Army-relevant capability gaps, technologies are continuously assessed both nationally and internationally. In addition, periodic meetings are conducted to discuss and recommend strategic research areas critical to advancing the Warfighter's capabilities.			
FY 2018 Plans: Study emerging topics based on Army S&T strategy and senior leader initiatives. Plan to initiate a new National Academies study.			
FY 2019 Plans: Will study emerging topics based on Army S&T strategy and senior leader initiatives and plan to initiate a new National Academies study.			
FY 2018 to FY 2019 Increase/Decrease Statement: Change in requirements and scope of effort.			
Accomplishments/Planned Programs Subtotals	0.959	1.061	0.895

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** C18 / *BAST*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / *Technical Information Activities*	Project (Number/Name) DW3 / *Army Geospatial Enterprise Implementation*	

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
DW3: *Army Geospatial Enterprise Implementation*	-	3.046	3.301	3.143	-	3.143	3.259	3.330	3.411	3.456	0.000	22.946
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project: provides geospatial domain expertise to Mission Command (MC) in implementing the Army Geospatial Enterprise (AGE) across all MC Systems to ensure interoperability across the Army; ensures Army systems can consume geospatial data from National-Geospatial Intelligence Agency (NGA) and with National System for Geospatial-Intelligence (NSG) partners as required by Department of Defense Instruction (DoDI) 5000.56; standardizes geospatial data between echelons and ensures Standard, Sharable Geospatial Foundation (a Mission Command Essential Capability) across Mission Command; and sustains core mission of operations. Project also provides an interoperable geospatial baseline system of systems in theater, which is a near-term requirement that cannot be deferred. Geospatial is a Mission Command Essential Capability and a critical enabler for the Common Operating Environment (COE) and the warfighter.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Geospatial Acquisition Support Office	3.046	3.301	3.143

Description: This effort supports the systems engineering, architecture, and test and certification of Army Acquisition Systems to support Program Executive Office (PEO)/Program Manager (PM) Computing Environment (CE) geospatial requirements to ensure that system's acquisition processes address geospatial concepts, technology and standards early in their development processes and provide an interoperable geospatial baseline system of systems in theater, which is a near-term requirement that cannot be deferred.

FY 2018 Plans:

Extend the AGE implementation within the Command Post Computing Environment, Mounted and Mobile Hand-Held CE's; develop alternatives for providing Standard, Sharable Geospatial Foundation (a Mission Command Essential Capability) to Mission Command Systems in a disconnected, Intermittent or Limited environment; develop and recommend standards to distribute SSGF from National to Tactical; develop "to be" AGE roadmap for Mission Command ensuring interoperability between Mission Command systems, the NSG, and our Joint, Inter-Agency, Inter-Governmental and Multi-National (JIIM) partners; and provide geospatial domain expertise for Cross-Cutting Capabilities for the Common Operating Environment.

FY 2019 Plans:

Will extend the AGE implementation within the Command Post Computing Environment, Mounted and Mobile Hand-Held CE's; develop alternatives for providing Standard, Sharable Geospatial Foundation (a Mission Command Essential Capability) to Mission Command Systems in a disconnected, Intermittent or Limited environment; develop and recommend standards to distribute SSGF from National to Tactical; develop "to be" AGE roadmap for Mission Command ensuring interoperability

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 6	**R-1 Program Element (Number/Name)** PE 0605803A / *Technical Information Activities*	**Project (Number/Name)** DW3 / *Army Geospatial Enterprise Implementation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
between Mission Command systems, the NSG, and our JIIM partners; and provide geospatial domain expertise for Cross-Cutting Capabilities for the Common Operating Environment. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Change in requirements and scope of effort.			
Accomplishments/Planned Programs Subtotals	3.046	3.301	3.143

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A