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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	28.781	28.478	33.323	-	33.323	32.701	30.540	31.520	39.858	-	-
<i>720: Tech Info Func Actv</i>	-	5.968	4.613	6.289	-	6.289	5.731	5.221	5.337	5.447	-	-
<i>727: Tech Info Activities</i>	-	5.664	9.039	11.134	-	11.134	11.463	10.030	10.342	10.549	-	-
<i>730: Pers & Trng Analys Act</i>	-	2.250	2.280	2.025	-	2.025	2.058	2.106	2.160	2.207	-	-
<i>731: Army High Performance Computing Centers</i>	-	5.180	4.021	4.544	-	4.544	4.368	4.477	4.578	4.677	-	-
<i>733: Acquisition Tech Act</i>	-	4.564	2.423	3.640	-	3.640	3.605	3.249	3.430	11.185	-	-
<i>C16: FAST</i>	-	1.415	1.966	1.596	-	1.596	1.464	1.502	1.543	1.575	-	-
<i>C18: BAST</i>	-	0.961	1.457	0.997	-	0.997	0.879	0.897	0.926	0.945	-	-
<i>DW3: Army Geospatial Enterprise Implementation</i>	-	2.779	2.679	3.098	-	3.098	3.133	3.058	3.204	3.273	-	-

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 program 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 DoDI 5000.2 dated May 12, 2003 as well as the Army Science Board (ASB) (projects 720 and 727). This program 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 programs expose these students to the working world of science and engineering (project 729). The program includes 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 730). The program includes funding for support for Army high performance computing centers (project 731). The program includes funding for improvements to the Army's acquisition process (project 733). This program 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 (project C16). Finally, this program funds studies by the Board on Army Science and Technology (BAST) (project C18). Coordination of this program with the other Services is achieved through inter-service working groups.

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>
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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 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 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	32.303	28.478	34.948	-	34.948
Current President's Budget	28.781	28.478	33.323	-	33.323
Total Adjustments	-3.522	0.000	-1.625	-	-1.625
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.500	-			
• SBIR/STTR Transfer	-1.022	-			
• Adjustments to Budget Years	-	-	-1.625	-	-1.625

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army										Date: February 2016		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>				Project (Number/Name) 720 / <i>Tech Info Func Actv</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
<i>720: Tech Info Func Actv</i>	-	5.968	4.613	6.289	-	6.289	5.731	5.221	5.337	5.447	-	-
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 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 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 the U.S. Army Research Development and Engineering Command (RDECOM), Aberdeen Proving Ground, MD and the U.S. Army Research Laboratory (ARL), Adelphi, MD.

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

	FY 2015	FY 2016	FY 2017
Title: Provide Army Funding Support for Federal Laboratory Consortium as Required by Public Law 104-113	0.310	0.251	0.256
Description: Funding is provided for the following effort.			
FY 2015 Accomplishments: Provided Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.			
FY 2016 Plans: Provide Army Funding Support for Federal Laboratory Consortium as Required by Public Law 104-113			
FY 2017 Plans:			

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Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 720 / <i>Tech Info Func Actv</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
Will provide Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.				
Title: Provide Administrative and Contractual Support for the Army Science Board Description: Funding is provided for the following effort. FY 2015 Accomplishments: Provided administrative and contractual support for the Army Science Board.		0.954	-	-
Title: Administrative Support for the Army's SBIR and STTR Programs Description: Army Small Business Innovation Research (SBIR) and Army Small Business Technology Transfer (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 U.S. 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 2015 Accomplishments: Provided the Army SBIR/STTR Program Offices with the resources necessary to execute these 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 letter reports, newsletters, briefings, presentation materials and correspondence; analyses; documentation for record keeping and reporting; and portal virtual machines 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 2016 Plans: Provide the Army SBIR/STTR Program Offices with the resources necessary to execute these Congressionally mandated Programs. The Army SBIR/STTR Program Offices procure program management and technical services required to support		0.889	1.029	1.283

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Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 720 / <i>Tech Info Func Actv</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
<p>the programs. The support services include a broad range of program and technical assistance services such as programming; database support; drafting of letter reports, newsletters, briefings, presentation materials and correspondence; analyses; documentation for record keeping and reporting; and portal virtual machines 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.</p> <p>FY 2017 Plans: Will provide 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 letter reports, newsletters, briefings, presentation materials and correspondence; analyses; documentation for record keeping and reporting; and portal virtual machines (VM) 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.</p>				
<p>Title: Provide Funding for Patent Fees and Patent Legal Expenses for U.S. Army Materiel Command (AMC) Commands and Laboratories</p> <p>Description: Funding is provided for the following effort</p> <p>FY 2015 Accomplishments: Provided funding for patent fees and patent legal expenses for AMC commands and laboratories.</p> <p>FY 2016 Plans: Provide funding for patent fees and patent legal expenses for AMC commands and laboratories.</p> <p>FY 2017 Plans: Will provide funding for patent fees and patent legal expenses for AMC commands and laboratories.</p>		1.158	1.164	1.069
<p>Title: Provide Funding for S&T Strategic Planning and Support</p> <p>Description: Funding is provided for the following effort.</p> <p>FY 2015 Accomplishments: Provided funding for S&T Strategic Planning and Support.</p> <p>FY 2016 Plans:</p>		0.298	0.320	0.326

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Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 720 / <i>Tech Info Func Actv</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
Provide funding for S&T Strategic Planning and Support.				
FY 2017 Plans: Will provide funding for S&T Strategic Planning and Support.				
Title: Administer S&T Database Computer Engineering Support Contract and Support RDECOM Databases S&T Management Support		2.359	1.849	3.355
Description: Funding is provided for the following effort.				
FY 2015 Accomplishments: Administered S&T database computer engineering support contract and supported RDECOM databases S&T management support.				
FY 2016 Plans: Administer S&T database computer engineering support contract and support RDECOM databases S&T management support.				
FY 2017 Plans: Will administer S&T database computer engineering support contract and support RDECOM databases S&T management support.				
Accomplishments/Planned Programs Subtotals		5.968	4.613	6.289
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				
E. Performance Metrics				
N/A				

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Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 727 / <i>Tech Info Activities</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
<i>727: Tech Info Activities</i>	-	5.664	9.039	11.134	-	11.134	11.463	10.030	10.342	10.549	-	-
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 Research, Development, Test, and Evaluation (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 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 DoDI 5000.2.

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 the Office of the Assistant Secretary of the Army, Acquisition, Logistics and Technology, The Pentagon, Washington, DC.

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

	FY 2015	FY 2016	FY 2017
<p>Title: Conduct and support S&T program portfolio assessments and analysis.</p> <p>Description: Funding is provided for the following effort.</p> <p>FY 2015 Accomplishments: Conducted and supported S&T program portfolio assessments and analysis.</p> <p>FY 2016 Plans: Conduct and support S&T program portfolio assessments and analysis.</p> <p>FY 2017 Plans: Will conduct and support S&T program portfolio assessments and analysis.</p>	0.759	1.257	1.720
<p>Title: Support Army S&T strategic planning, analysis, and prioritization.</p> <p>Description: Funding is provided for the following effort.</p> <p>FY 2015 Accomplishments:</p>	3.237	4.992	6.432

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Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 727 / <i>Tech Info Activities</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
Supported Army S&T strategic planning, analysis, and prioritization. FY 2016 Plans: Support Army S&T strategic planning, analysis, and prioritization. FY 2017 Plans: Will support Army S&T strategic planning, analysis, and prioritization.				
Title: Provide funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions. Description: Funding is provided for the following effort. FY 2015 Accomplishments: Provided funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions. FY 2016 Plans: Provide funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions. FY 2017 Plans: Will provide funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions.		1.068	1.800	1.912
Title: Provide Army support to Assistant Secretary of Defense for Research and Engineering Executive Staff for DoD-wide Science and Technology oversight. Description: Funding is provided for the following effort. FY 2015 Accomplishments: Provided Army support to Assistant Secretary of Defense for Research and Engineering Executive Staff for DoD-wide Science and Technology oversight. FY 2016 Plans: Provide Army support to Assistant Secretary of Defense for Research and Engineering Executive Staff for DoD-wide Science and Technology oversight. FY 2017 Plans:		0.600	0.990	1.070

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
Will provide Army support to Assistant Secretary of Defense for Research and Engineering Executive Staff for DoD-wide Science and Technology oversight.			
Accomplishments/Planned Programs Subtotals	5.664	9.039	11.134

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

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 730 / <i>Pers & Trng Analys Act</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
<i>730: Pers & Trng Analys Act</i>	-	2.250	2.280	2.025	-	2.025	2.058	2.106	2.160	2.207	-	-
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 US Army Research Institute for the Behavioral and Social Sciences (ARI), Ft. Belvoir, VA.

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

	FY 2015	FY 2016	FY 2017
Title: PERS & TRNG ANALYS ACT	2.250	2.280	2.025
Description: Funding is provided for the following effort.			
FY 2015 Accomplishments: Research conducted based on critical issues identified by the Secretary of the Army (SA), Chief of Staff of the Army (CSA), Deputy Chief of Staff G-1 (DCS G-1), and Assistant Secretary of the Army Manpower and Reserve (ASA(M&RA)).			
FY 2016 Plans: Conducting research on critical issues identified by the Secretary of the Army (SA), Chief of Staff of the Army (CSA), Deputy Chief of Staff G-1 (DCS G-1), and Assistant Secretary of the Army Manpower and Reserve (ASA(M&RA)).			
FY 2017 Plans: Will conduct reserach based on critical issues identified by the Secretary of the Army (SA), Chief of Staff of the Army (CSA), Deputy Chief of Staff G-1 (DCS G-1), and Assistant Secretary of the Army Manpower and Reserve (ASA(M&RA)).			
Accomplishments/Planned Programs Subtotals	2.250	2.280	2.025

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

N/A

Remarks

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D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army										Date: February 2016		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>				Project (Number/Name) 731 / <i>Army High Performance Computing Centers</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
<i>731: Army High Performance Computing Centers</i>	-	5.180	4.021	4.544	-	4.544	4.368	4.477	4.578	4.677	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Not applicable for this item.

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 the U.S. Army Research Laboratory (ARL), Aberdeen Proving Ground, MD and the U.S. Army Tank and Automotive Research, Development, and Engineering Center (TARDEC), Warren, MI.

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

	FY 2015	FY 2016	FY 2017
Title: Sustain the High Performance Computing (HPC) Environment and Infrastructure in Support of the U.S. Army Research Laboratory (ARL)	3.580	3.601	4.264
Description: Funding is provided for the following effort.			
FY 2015 Accomplishments: Developed software for emerging central processing unit graphics processing unit (CPU-GPU) based heterogeneous computing architectures; maintained scalable software tools for Army users; maintained and developed software to support large data analysis support for petabytes of output; investigated emerging networking paradigm's for HPC networking R&D, classified SAP			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
<p>scientific visualization, and software maintenance for Army-specific SAP projects; and researched computer systems to support fundamental and applied HPC research at ARL.</p> <p>FY 2016 Plans: Sustain HPC environment and infrastructure for armor/anti-armor, low observable technologies, large Army network data analytics for Army test and evaluation; validate and maintain software for emerging central processing unit graphics processing unit (CPU-GPU) based heterogeneous computing architectures; maintain software and hardware for ARL-specific applications, develop software engineering methods for maintaining scalable software tools for Army user; develop and provide software defined networking for HPC networking, classified SAP scientific visualization, and software maintenance for Army-specific SAP and related HPC projects; and research computer systems to support fundamental and applied HPC research for the Army. This effort supports (a) sustainment of SAP systems, software, visualization, (b) infrastructure support to emerging/future HPC systems (for example tactical cloudlet, heterogeneous computers), and (c) infrastructure for emerging networking (software defined networking).</p> <p>FY 2017 Plans: Will sustain computing infrastructure for ARL-specific special access facilities and Open Campus HPC systems; support advanced computing research architectures; maintain scalable software repository for the software developed under various Army funded research programs (e.g., Army High Performance Computing Research Center program, Army Research Office funded programs, University Affiliated Research Centers, Collaborative Technology and Research Alliances – specifically armor/anti-armor, low observable technologies, data intensive sciences software); support training and outreach activities (to facilitate training workforce in using new HPC technologies and parallel software); and support innovative hardware and software for next generation HPC networking, memory, and hierarchical storage pertaining to Supercomputers.</p>				
<p>Title: Sustain the High Performance Computing (HPC) Environment and Infrastructure in Support of the U.S. Army Tank and Automotive Research Development and Engineering Center (TARDEC)</p> <p>Description: Funding is provided for the following effort.</p> <p>FY 2015 Accomplishments: Sustained the HPC environment and infrastructure in support of the U.S. Army TARDEC.</p> <p>FY 2016 Plans: Sustain at reduced levels the HPC environment and infrastructure, classified and unclassified, at U.S. Army RDECOM-TARDEC in support of the execution of physics-based analyses performed on Army ground vehicles and platforms.</p> <p>FY 2017 Plans:</p>		1.600	0.420	0.280

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
Will transition from the HPC environment and infrastructure to utilizing the DoD Supercomputer Resource Center (DSRC) in support of the execution of physics-based analyses performed on Army ground vehicles and platforms.				
Accomplishments/Planned Programs Subtotals		5.180	4.021	4.544
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				
E. Performance Metrics N/A				

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Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 733 / <i>Acquisition Tech Act</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
<i>733: Acquisition Tech Act</i>	-	4.564	2.423	3.640	-	3.640	3.605	3.249	3.430	11.185	-	-
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 program supports analysis efforts to conduct 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 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 the Army Acquisition Support Center, Ft. Belvoir, VA.

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

	FY 2015	FY 2016	FY 2017
Title: ACQUISITION TECH ACT	4.564	2.423	3.640
<p>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.</p> <p>FY 2015 Accomplishments: Distributed and beta tested 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. Analyzed acquisition program financial programming and budgeting requirements. Continued development of long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis.</p> <p>FY 2016 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</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) 733 / <i>Acquisition Tech Act</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
programming and budgeting requirements. Continue development of long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis. FY 2017 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; will analyze acquisition program financial programming and budgeting requirements; will continue development of long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis.				
Accomplishments/Planned Programs Subtotals		4.564	2.423	3.640
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				
E. Performance Metrics N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army										Date: February 2016		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>				Project (Number/Name) C16 / FAST			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
C16: FAST	-	1.415	1.966	1.596	-	1.596	1.464	1.502	1.543	1.575	-	-
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 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 the US Army Materiel Command (AMC), Redstone Arsenal, AL Research, Development and Engineering Command (RDECOM), Aberdeen Proving Ground, MD.

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

	FY 2015	FY 2016	FY 2017
Title: Respond to combatant commanders worldwide with technological solutions.	1.415	1.966	1.596
Description: Funding is provided for the following effort.			
FY 2015 Accomplishments: Responded to combatant commanders worldwide with technological solutions to urgent materiel problems they identify; deploy science advisors with US Task Forces in support of combatant commanders; executed biannual Technology Applications Conference.			
FY 2016 Plans: Respond to combatant commanders worldwide with technological solutions to urgent materiel problems they identify; deploy science advisors with US Task Forces in support of combatant commanders; execute annual Program Review. Provide additional			

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) C16 / FAST		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
support needed to participate in combatant commander exercises; respond to corresponding Warfighter Requests for Information (RFI's) project support to offset capability gaps identified by the Warfighter.				
FY 2017 Plans: Will respond to combatant commanders worldwide with technological solutions to urgent materiel problems they identify; will deploy science advisors with US Task Forces in support of combatant commanders; will execute annual Program Review. Will provide additional support needed to participate in combatant commander exercises; will respond to corresponding Warfighter Requests for Information (RFI's) will provide project support to offset capability gaps identified by the Warfighter.				
Accomplishments/Planned Programs Subtotals		1.415	1.966	1.596
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				
E. Performance Metrics N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>				Project (Number/Name) C18 / BAST			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
C18: BAST	-	0.961	1.457	0.997	-	0.997	0.879	0.897	0.926	0.945	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Not applicable for this item.

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) an organization within the National Academies of Sciences 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 2015	FY 2016	FY 2017
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 U.S. Army.	0.961	1.457	0.997
Description: Funding is provided for the following effort.			
FY 2015 Accomplishments: Studied emerging topics based on Army S&T strategy and senior leader initiatives.			
FY 2016 Plans: Study emerging topics based on Army S&T strategy and senior leader initiatives.			
FY 2017 Plans: Will study emerging topics based on Army S&T strategy and senior leader initiatives. Planning to initiate a new National Academies study.			
Accomplishments/Planned Programs Subtotals	0.961	1.457	0.997

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	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		

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army										Date: February 2016		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>				Project (Number/Name) DW3 / <i>Army Geospatial Enterprise Implementation</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
DW3: <i>Army Geospatial Enterprise Implementation</i>	-	2.779	2.679	3.098	-	3.098	3.133	3.058	3.204	3.273	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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 DoDI 5000.56; Standardizes geospatial data between echelons and ensures Standard, Sharable Geospatial Foundation (a Mission Command Essential Capability) across Mission Command; Sustains core mission of operations. 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 COE and the warfighter.

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

	FY 2015	FY 2016	FY 2017
Title: Geospatial Acquisition Support Office	2.779	2.679	3.098
Description: This effort supports the systems engineering, architecture, and test and certification of Army Acquisition Systems to support PEO/PM Computing Environment 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 2015 Accomplishments: Extended Army Geospatial Enterprise (AGE) implementation within the Common Operating Environment (COE); developed and published geospatial data model ensuring integration between US Marine Corp and Army and aligning with updated National System for Geospatial Intelligence (NSG) standards; identified geospatial end state for COE version 3.0, provided experimentation and pilot support including geospatial expertise to COE pilot project; Developed, with industry, a geospatial data standard for mobile handheld devices called geopackage. Improved geospatial data exchange with mobile devices in a tactical environment.			
FY 2016 Plans: Develop geospatial end state for the Army Geospatial Enterprise (AGE) implementation within the Common Operating Environment (COE) version 3.0; Update geospatial data model ensuring integration between US Marine Corp and Army and alignment with updated National System for Geospatial Intelligence (NSG) standards; Define National to tactical geospatial architecture for Mission Command (MC), Develop AGE certification processes (aligned with current and planned Army and National Geospatial-Intelligence Agency (NGA) certification processes) to ensure MC systems align with AGE standards and architectures and therefore can exchange geospatial data. Develop profile for geopackage within the COE to ensure standard			

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605803A / <i>Technical Information Activities</i>	Project (Number/Name) DW3 / <i>Army Geospatial Enterprise Implementation</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
<p>implementation within Mission Command. Will identify implementation recommendations (standards profiles, architectures and data model improvements) for AGE for COE version 3.0. Will continue improving geospatial data exchange with users in a disconnected, intermittent, and limited network environment environment.</p> <p>FY 2017 Plans: Will extend Army Geospatial Enterprise (AGE) implementation within the Command Post Computing Environment (CP CE), Mounted and Mobile Hand-Held CE's; will develop alternatives for providing Standard, Sharable Geospatial Foundation ((SSGF) a Mission Command Essential Capability) to Mission Command Systems in a disconnected, Intermittent or Limited (DIL) environment; Will develop and recommend standards to distribute SSGF from National to Tactical; will develop "to be" AGE roadmap for Mission Command ensuring interoperability between Mission Command systems, the National System for Geospatial Intelligence (NSG) and our Joint, Inter-Agency, Inter-Governmental and Multi-National (JIIM) partners; will provide geospatial domain expertise for Cross-Cutting Capabilities for the Common Operating Environment</p>				
Accomplishments/Planned Programs Subtotals		2.779	2.679	3.098
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				
E. Performance Metrics				
N/A				