Joint Deployment Distribution Enterprise (JDDE)
Call for Government-proposed
Research, Development, Test and Evaluation (RDT&E) Projects, FY17-21

United States Transportation Command (USTRANSCOM) is soliciting government organizations for RDT&E projects to address applicable Distribution Process Owner (DPO)/Joint Deployment and Distribution Enterprise (JDDE) Capability technology gaps. This solicitation is for projects starting in FY17 through FY21.

This is a two-phase selection process (Phase I is a 4-page white paper and Phase II is a full, 20-page proposal) call.

Those submitting proposals are encouraged to speak with USTRANSCOM subject matter experts to discuss their proposal, details of the USTRANSCOM need, and other factors to improve the quality of the proposal and to better determine commitment to sponsorship and transition.

2015 Deadlines are as follows:

31 Mar 1600 (CST)	-- Submittal of electronic Phase I white papers. Late submissions will not be considered.
1 - 30 Apr	-- Phase I evaluation period.
1 May	-- Phase II notifications.
May/Jun	-- Phase II Offeror's can discuss proposals with SMEs/evaluators to gain clarification and to better focus proposals on targeted gaps. TCJ5-GC RDT&E Team will facilitate discussions.
30 Jun 1600 (CST)	-- Submittal of electronic Phase II proposals. Late submissions **will not** be considered.
30 Oct 15	-- Notification of final selection (due to multi-month collaborative evaluation/vetting process)

Appendix 1 contains the highest-priority needs identified by USTRANSCOM, its Service components, and the JDDE community. Additional technology gaps can be found at http://www.transcom.mil/rdte/, proposals addressing those technology challenges are a lower priority but will be considered if represent a next-generation leap in technology. Proposals addressing Appendix 1 needs will compete best.

Projects should be described in terms of the appropriate Technology Readiness Level (TRL). In general, projects should start at TRL level 4-6 (Budget Activity 3, Advanced Technology Development) for best likelihood of success in the selection process. Proposals to merely extend an existing capability, or modernize it (such as preplanned product improvement (P3I)) fall in the acquisition/procurement area, are beyond TRL 8, and are not candidates for USTRANSCOM

RDT&E funding. TRL definitions/descriptions found in USTRANSCOMI 61-1 at https://ww2.ustranscom.mil/publications/pubs_index.cfm.

Proposals most likely to be chosen by the government will demonstrate a significant number of project selection criteria listed at Appendix 3. Prior experience demonstrates that relatively short-duration projects (up to 3 years), concentrating on prototyping *and transitioning/integrating* a new "component" capability within existing JDDE systems, architectures and programs/systems of record, are likely to be most competitive. Proposers *may* submit proposals for multi-year programs of research and development, but should be aware longer-duration efforts face significant challenges finding a transition sponsor and funding.

If multi-year/multi-project efforts are proposed, proposers should identify a baseline project, (including, if appropriate, a start-up engineering feasibility study) with optional follow-on efforts to be selected by USTRANSCOM, based on assessment of the success of earlier segments, continued interest in proposed capability, and the availability of funding for development and a sponsor for transition.

Proposing organizations should plan to execute approved projects though their own contracting and technical/management oversight capabilities and facilities. USTRANSCOM will provide RDT&E funding via appropriate government funding vehicle. USTRANSCOM requires monthly report of funds (obligations/outlays) and semi-annual programmatic briefings.

The proposer, with assistance of the Government sponsor, is responsible for designing and executing a transition strategy, which should include detailed planning with programs/systems of record to move the new technology out of the development environment into system program office work and/or into operational use.

If the submitting government agency is sponsoring a project to be developed with an industry or academic partner, those outside agencies should be apprised that USTRANSCOM contractor personnel (including but not limited to The MITRE Corporation, LMI Government Consulting, CGI Federal, and others) may act as advisors to the selection process. Contractors advising USTRANSCOM in this evaluation have already signed, or will be required to sign, non-disclosure agreements prior to accessing proprietary materials.

If the proposer wishes to submit a classified proposal, first contact below Points of Contact at phone/e-mail/address listed below.

Send correspondence to transcom.scott.tcj5j4.list.rdte@mail.mil

Points of contact:

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4 Appendices (Attached)
1. Technology Needs/Focus Areas for FY17
2. JDDE Capability Gaps/Sub-gaps
3. USTRANSCOM RDT&E Project Selection Criteria
4. USTRANSCOM RDT&E 2-Phase Project Selection Process (contains format templates)

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APPENDIX 1

Technology Needs/Focus Areas for FY17

USTRANSCOM RDT&E focuses on emerging technologies with joint deployment/distribution improvement potential. The challenges in this announcement are intended to provide general joint deployment/distribution areas of interest and should not be construed to represent areas which USTRANSCOM can or will apply funds to proposed solution.

FOUR TECHNOLOGY CATEGORIES (all projects fall under one of these categories):

Command and Control/Optimization/Modeling and Simulation - Emerging technologies that support the sharing of information and services across security boundaries that maintains information assurance and system integrity; technologies that ease the development cycle on source systems for web services and make best use of geographically distributed server environments. Integration of these complex technologies and methodologies requires improved processes for managing virtualized environments and service based architectures. These technologies include but are not limited to the following areas of interest; cross domain communications, web services provisioning, and portfolio management capabilities and transfer of data from a government web site in the public domain to a sensitive/unclassified government data system for transportation planning/shipping of vendor shipments.

End-to-End Visibility - Enhanced end-to-end visibility of all aspects of the projection and sustainment is required to improve the effectiveness/efficiency of deployment/distribution/redeployment operations to ensure warfighter support and confidence. This requires investigation into next generation Automated Information Technology (AIT)/Total Asset Visibility (TAV) technologies and/or container security to improve end-to-end distribution visibility and enhance planning/ execution and transform sustainment operations.

Cyber - Mission assurance in a persuasive/dynamic cyber environment.

Global Access Technologies - Seeking Air/Land/Sea technologies that provide timely capability to deliver cargo to dangerous (i.e. anti-access/austere) locations across a complex, distributed battlefield without jeopardizing warfighter safety.

HIGHEST PRIORITY NEEDS/FOCUS AREAS (not rank ordered):

Adaptive Planning and Execution - The community requires trained personnel, well defined processes and the essential technology to ensure DOD's ability to rapidly develop, assess, adapt and execute plans in a dynamic environment.

Distribution Planning and Forecasting - There is a lack of collaborative distribution planning, based on an understanding of aggregate customer requirements, for optimizing the JDDE. Require synchronized planning, cost estimating, forecasting and collaboration capabilities to ensure people, processes and assets are in place to execute the plan.

Modeling - Budget uncertainty and the evolving global mobility environment drive the need to modify our business processes, equipment and infrastructure. Currently USTRANSCOM is limited in its ability to weigh alternative courses of action and/or measure the effectiveness of the proposed changes. USTRANSCOM requires modeling & decision support tools to transform systems, programs and initiatives to ensure operational efficiency.

Manipulation of Large Data Sets - The command requires the capability to explore, analyze, and identify trends and correlation between elements of large data sets. This includes the ability to couple separate databases to create a set of data elements. Such manipulation includes a set of tools to assist analysts with identifying, visualizing, and portraying data.

Information Visualization -The Warfighter requires a graphical view of logistics and transportation land, sea, waterway, and air operational information with drill-down capability into specific details. Users require a visual representation of information concerning inventory, movement, logistics and transportation information as well as easier and quicker understanding of rapidly changing information based on conveyance maintenance status, weather, intelligence, political/military considerations, etc. Require geospatial situational awareness and collaboration capabilities among multiple agencies to improve planning & execution. Automated data entry is required in any system.

Distributed Global Mobility Command and Control (C2) - C2 is the heart of successful military endeavors, therefore the system must support the full C2 mission spectrum of monitor, assess, plan, and execute. For global mobility, C2 must be seamless regardless of theater of operation and/or customer being supported. This includes technologies that allow distributed C2 with mobile platforms (whether on land, sea or in the air) as well as technologies that provide the capability to replicate large databases, in a synchronized fashion, across a globally distributed network. In addition, these enclaves must be capable of working "off-line," then seamlessly rejoining the global network following combat or contingency degradation.

Risk Assessment – There is a lack of real-time risk assessment information available for commanders, as well as deploying units, to rapidly determine acceptable levels of risk while en route to final destinations or at a intermediate staging locations.

Automatic Identification Technology (AIT) - AIT is the basic building block in the DOD's efforts to provide timely asset visibility in the pipeline -- whether in-process, in-storage, or in-transit. USTRANSCOM is interested in source data automation supported by AIT that will enable operators on the ground to provide accurate and timely information to update the plan with actual events during deployment, sustainment, and redeployment/retrograde movements. Also interested in the joint integration of different AIT and In-transit Visibility (ITV) technologies and architectures. For example, the combining of active RFID technologies and mesh networking technologies into a single device that has the capability of meeting requirements for ITV, facilitate cargo processing and asset management at transportation/distribution nodes, and reduce cost associated with purchase and management of multiple AIT .

Information Discovery and Integration - Supports DOD Chief Information Officer "post before process" methodology providing an environment of "publish/subscribe“ for sharing logistics and transportation operational information. Provides an automated tool for identifying common data elements currently shared among systems. Approved standard terms for specific data elements can be provided to program management offices for use in universal tag naming. This results in single vernacular for logistics and transportation information and centrally managed distributed information and builds on current reference table and metadata repository.

Cyber Security - USTRANSCOM and its components must be able to defend its information, mitigate cyber threats and be able to conduct operations in a cyber contested environment. This requires a platform independent capability to secure deployment/distribution information resident in or traversing low assurance info networks/environments. Capability must allow for assured, secure and trusted communications protected with Federal Information Processing Standard (FIPS) 140-2 compliant cryptography. Solutions must require minimal management/infrastructure overhead, be able to integrate into existing DOD and commercial information systems, and leverage government-owned/operated capabilities to the maximum extent possible. Capability must aid the government in its ability to detect, analyze, assimilate, mitigate, and deter cyber threats. A host-based User Activity Monitoring (UAM) Capability is needed to assist the government in identifying and mitigating insider threats. UAM data should be available for analysis and processing in near real-time.

Rapid Distribution Technologies - Concepts/technologies that improve the end-to-end flow of military unit equipment and cargo through ocean ports, aerial ports and intermodal inter-change points, to include motion compensation interface platforms, for use with commercial cargo vessels to enhance cargo throughput of military unit equipment at sea.

Point of Need Delivery Technologies - Seeking innovative technologies that provide improved accuracy and timely delivery of cargo to anti-access/austere locations across a complex, distributed battlefield without jeopardizing delivery crew safety.

NOTE: Additional technology gaps can be found by accessing the USTRANSCOM RDT&E Handbook (USTRANSCOMH 60-2) under “References” tab at http://www.transcom.mil/rdte/, proposals addressing those technology challenges are a lower priority but will be considered.

APPENDIX 2

JDDE Capability Gaps/Sub-gaps

1. Visibility

There is insufficient timely and accurate information on the location and status of materiel and transportation assets. Stakeholders throughout the distribution process require the ability to determine shipment status through system/service access, automatic information technology (AIT) or event management. There is a lack of end-to-end materiel asset visibility and transportation process inefficiencies exist between nodes in the DOD supply chain. Stakeholders need the capability to view the status and availability of all materiel and transportation assets in-storage, in-transit, or in-repair, detect pipeline bottlenecks and provide recommended alternatives to overcome the bottleneck.

- The JDDE lacks enhanced end-to-end visibility of all aspects of the projection and sustainment of forces and equipment.
- The issuing and ordering activities have little or no visibility of the movement of Class IV materiel once it has left the Port of Debarkation (POD). There is no over-arching system to provide all stakeholders with visibility of Class IV movement within theater. This lack of visibility limits the issuing activity's ability to respond to routine customer requests for updated shipment information in a timely manner.
- There is no common global architecture which portrays system software, hardware, Information Exchange Requirements (IERs) and protocols among all the elements of cargo booking to ensure shipment unit consolidation, deconsolidation, financial and customs requirements are met.
- Existing information technology (IT) systems and support tools do not allow collaboration between deployment systems and theater distribution planning. As a result, multiple theater-level organizations are ill-equipped to conduct coordinated planning and scheduling and are forced to "hobby shop" their own tools making the sharing of information and ability to see schedules for specific materiel difficult, if not impossible.
- Originating, intermediate and final destination nodes are unable to optimize outbound distribution due to insufficient advanced inbound notification.
- No enforced policy for ensuring / maximizing compliance, quality and integrity of information disseminated by all supply chain partners or systems.
- Poor quality of data creates frequent re-work and delays in planning and execution.

Sub-Gaps:

Common Architecture	1
Bandwidth / Connectivity - CLOSED 11/14/2013	2
Movement Status Information	3
Business Event Capture – CLOSED 11/14/2013	4
Tracking of Consolidated Orders – CLOSED 11/14/2013	5
Data Quality	6
Single Aggregate View – CLOSED 11/14/2013	7

Exception Handling / Event Management – CLOSED 11/14/2013	8
User Access and Training – CLOSED 11/14/2013	9

2. Distribution Systems Interoperability

Transportation information exchange across the DOD is inhibited by the disparity of systems, differing data standards and insufficient interfaces. Queries and retrieval of movement status and shipment information cannot be executed due to lack of connectivity between the various components of the supply chain.

- There is no single, shared, enterprise view(s) of transportation due to disparate, yet similar systems to serve individual Services, agencies, and other commands.
- There is no enforced common data governance. Nor does a map exist that provides detailed shipment information (including needs of both peace time and contingency operations).
- Source systems use different data standards making aggregation in ITV systems difficult, and often inaccurate.
- The Department of Defense (DoD) cannot optimize its fulfillment of customer requirements since it does not provide inventory interoperability across all Services, theaters and locations. Information and materiel exchange across the DoD is inhibited by the disparity of systems and insufficient interfaces. Inventory status and shipment information cannot be affected due to lack of connectivity between the various components in supply chain.
- The issuing activity is unable to optimize order fulfillment in-theater due to a lack of inventory visibility at the Services' stocking locations. Visibility into all available in-theater stock would allow for cross-leveling and lateral support.
- Distribution efficiency and effectiveness are hindered by a lack of process and systems interfaces needed to execute intra-Service and inter-Service supply referrals (lateral support).
- Intra-Service and inter-Service supply referrals (lateral support) and financial reconciliation lack necessary processes and systems interfaces for seamless automatic execution.
- The Department of Defense (DoD) lacks processes for defense-wide (joint, inter-agency, including links to coalition partners) inventory planning and management.

Sub-Gaps:

Common Data Governance	1
Common Architecture / Single Aggregate View – CLOSED 11/14/2013	2
Shipment Detailed Information – CLOSED 04/19/2013	3
Parent-Child Shipment Information – CLOSED 11/14/2013	4
Joint Retail Inventory Interoperability	5
AALPS Software Conflicts – CLOSED 04/19/2013	6
CMOS and GATES Communication – CLOSED 04/19/2013	7
GATES RF Tags – CLOSED 02/23/2010	8
Distribution Network Analysis – CLOSED 11/14/2013	9

3. Distribution Planning and Forecasting

There is a lack of collaborative distribution planning, based on an understanding of aggregate customer requirements, for optimizing the End-to-End (E2E) distribution process. E2E distribution planning and forecasting efforts are not synchronized. There is a lack of properly trained personnel, established procedures, and transportation/materiel assets to execute the distribution plan. There is limited ability to conduct synchronized strategic and theater deployment and distribution planning/optimization employing demand forecasts. There is a limited E2E requirements process for the movement of sustainment cargo. There is a limited ability to discern and act on theater capacity-based movement demands.

- Warfighters have no single, integrated view(s) of force movement and sustainment planning requirements.
- Originating, intermediate, and final destination transportation nodes are unable to optimize outbound distribution due to insufficient advanced inbound notification.
- Intermediate distribution nodes do not have the trained people, capabilities nor capacities needed to support the distribution of medical material. The Distribution and Transportation Management organizations and units including the Joint Movement Center (JMC) and deployment and Distribution Operations Center (DDOC) do not collaboratively plan with Class VIII subject matter experts (SMEs) the complete end-to-end (E2E) routing, transportation, handling and delivery of medical material. This collaborative specifically includes the consideration of intermediate distribution and trans-shipment node capabilities and limitations when planning the routing of forward, return and retrograde movements.
- Planning and coordination of the Class VIII distribution and transportation activities is not performed under a synchronized concept of operations with the input of Class VIII subject matter experts (SMEs).
- Individual trans-shipment nodes in the supply chain, including intermediate Aerial Ports of Debarkation (APODs) and transportation transfer points, are accountable to separate organizational commands and/or Service Components. Each of these Commands / Components maintains individual performance objectives and incentives that are not synchronized with the unique needs of the commodity's distribution.
- Technologies need to be continually leveraged / developed that can transform force projection, sustainment velocity, and synchronize (through information exchange) strategic & theater delivery capabilities to meet customer needs.
- Intra-theater movements (both forces and sustainment) are negatively impacted by a lack of tools and a common process to facilitate visibility, planning and integration of strategic inbound traffic with available theater multimodal assets.
- A standardized process for requesting and prioritizing movements within the Area of Responsibility (AOR) is required. It must be applicable to all Service requirements and recurring training must be available to accommodate the turnover of users. The process needs to be flexible enough to include requirements from host nation or coalition forces.
- A single unit of identification (Ex: Unit Line Number (ULN), Transportation Control Number (TCN), Joint Movement Request (JMR)) must be established to attach to requirements and carried throughout the distribution pipeline to facilitate accurate tracking of each item. The Defense Transportation Regulation (DoD 4500.9-R) may

need to be modified to provide specific direction so that all the Services use the same process.

- Integrated theater distribution planning tools are lacking. They are necessary to provide the flexibility to make rapid and accurate changes to the force list. Without this key information it is difficult to forecast sustainment requirements. Integration of Automated Information Systems (AIS) across functional users would help aggregate / manage requirements.
- Warfighters do not have a single integrated view of force movement and sustainment planning requirements from Point of Entry (POE) in theater to end destination. Also lacking is visibility of Direct Vendor Delivery (DVD) shipments and little to no advance data on incoming materiel.
- Sustainment planning is not translated into execution tasks. There is a lack of full integration between processes used to deploy and sustain the joint force. Additionally, the Joint Deployment and Distribution Enterprise (JDDE) needs to be able to perform predictive sustainment analysis in order to apply Sense and Respond Logistics (SRL).
- Insufficient truck capacity was a shortfall against the estimated requirement developed during operational planning. Logisticians and supply chain leaders are unable to document the total theater requirement for the dry cargo distribution system over time.
- Strategic lift planning was not synchronized with theater lift planning. Strategic lift was planned without considering tactical lift constraints.
- There is a lack of collaborative distribution planning based on an understanding of aggregate customer requirements for optimizing the end-to-end (E2E) distribution process. The Time-Phased Force Deployment Data (TPFDD) process does not adequately support rapid and task order-driven needs.
- Unexpected / unplanned events create delays in terminal operations.
- The DoD lacks a continuous / optimal balancing of total demand and capacity from plan inception to mission completion.
- Inefficient full-spectrum transportation adaptive planning and analysis in a collaborative, web-accessible, service-oriented environment sub-optimizes execution.
- Capability to fine-tune the pairing of air movement requirements / resources to maximize aircraft utilization efficiency does not exist.
- The Joint Deployment and Distribution Enterprise (JDDE) has yet to leverage social networking / crowd sourcing / gaming / other technologies to provide a continuous / optimal balancing of total demand and capacity from plan inception to mission completion.
- The Joint Deployment and Distribution Enterprise (JDDE) is lacking the ability to build deployment, sustainment and redeployment plans; as well as rapidly / systematically create and revise existing plans as emerging events dictate through informed global situational awareness.
- Current Transportation Protective Service (TPS) requirements (as delineated in the Defense Transportation Regulation (DTR) and associated publications) for the transport of controlled medical material (special Class VIII sub-commodities of Controlled Drugs and Precious Metals) severely constrain / restrain some Military Class VIII Supply Support Activities' ability to support 'remote' locations as these TPS requirements presently prevent / prohibit the use of commercial / contract air cargo movement / transportation services (aka white-tail services).

- Scheduling, collection, preparation and movement processes for repairable retrograde(s) are poorly defined.
- Return scheduling processes are not synchronized with maintenance, rebuild and reclamation processes and financial activities.
- Business rules for retrograde mode, packaging, special handling and receipt are poorly defined, trained and monitored.
- Return credit business rules are not coupled with retrograde credit penalties to recover excess handling costs for non-compliance with disposition instructions.
- Where predictive maintenance forecasting capabilities exist they are not linked (machine to machine) to distribution and logistics support responses.
- Predictive maintenance forecasting capabilities are not resident in many major end-items / systems.
- Systems maintenance today is either conducted reactively (after a costly failure occurs) or routinely (whether maintenance is needed or not). Potential corrective action: Sense and Respond Logistics (S&RL).
- No capability currently exists to link distribution and logistics responses to maintenance failure sensing capabilities.
- No predictive maintenance strategy exists to achieve increased equipment availability.
- The Joint Deployment and Distribution Enterprise (JDDE) lacks the capability to predict maintenance and logistics issues / demand forecasting to optimize supply chain.
- There is no automated link from Service tactical maintenance status / reports to strategic systems.
- The ability does not exist to determine parts failure / usage patterns and mission type / environment impact to initiate sustainment support actions.

Sub-Gaps:

Movement Requirement Identification	1
Movement Planning / Optimization	2
Transportation Node Optimization	3
Class VIII Planning and Coordination	4
APOD and SPOD C2 - CLOSED 11/14/2013	5
Retrograde Scheduling and Preparation	6
Predictive Forecasting for Equipment Failures	7
Synchronized Medical Load Movements - CLOSED 11/14/2013	8

4. Requisition Priorities

Current processes and systems permit nearly unconstrained use of high movement priorities, which in turn gives the requestor (customer) unrealistic expectations and an invalid Required Delivery Date (RDD). There is limited ability to identify priority of movements across movement categories, modes and levels/echelons. The JDDE needs a more accurate and realistic process for the assignment of customer priorities.

- Current processes and systems permit nearly unconstrained use of high priorities, unrealistic and invalid Required Delivery Dates (RDDs).
- Customer is not informed on changing conditions or expected delivery dates (EDDs).

Sub-Gaps:

RDD Constraints – CLOSED 11/14/2013	1
Priority System Service Level Differentiation – CLOSED 04/19/2013	2
Customer Feedback on Changes	3

5. Process Management and Business Rules

Joint process descriptions and business rules either do not exist or are unclear for many key deployment and distribution processes. A lack of well-defined, integrated process descriptions cause shipment delays, waste resources and undermine efforts to streamline the supply chain. Unclear or non-existent business rules lead to breakdowns in organizational lines of communication.

- To facilitate consistent Joint Deployment and Distribution Enterprise (JDDE) operations, from training through combat execution, standardized coherent Joint Distribution Policy and Guidance must be established and enforced. Without an endorsed Standard Operating Procedure (SOP) it is not possible to examine the distribution system as a single holistic entity and identify what and where problems arise, assess the impact on the entire JDDE, and then take steps to optimize the system to produce the most effective service.
- There are no existing processes for working Direct Vendor Delivery (DVD) shipments, government donations and other non-DOD goods. These items present numerous challenges in receiving, expeditiously processing, requesting and scheduling onward movement.
- Lack of, or limited use of, force modules restrict ability to accommodate requests, accurately schedule and effectively track unit movements through execution.
- Supply, transportation and force closures rules/processes are not followed to allow reports to be closed out in automated logistics systems in a timely manner.
- Manual and automated multi-modal (air, rail, truck, ocean and pipeline) booking Information Exchange Requirements (IERs) poorly defined. There is a lack of sufficient information for In-Transit Visibility (ITV), shipping instructions and customs clearance.
- Multiple surface booking systems have different rates and no clear purpose for each (Ex: Integrated Booking System (IBS), Direct Carrier Booking, etc.).
- Rail and One-Time-Only (OTO) Ocean Booking requests and confirmation processes lack standards for timeliness.
- There is no common global architecture which portrays system software, hardware, Information Exchange Requirements (IERs) and protocols among all the elements of cargo booking to ensure shipment unit consolidation, deconsolidation, financial and customs requirements are met.
- There is no enforced common data model, map and data definitions which include a common interface with carriers, document management support, event tracking and diversions or merges during transit.

- Multiple multi-modal booking processes / systems with different rates exist. Re-booking for next available opportunity is a manual process.
- Performance metrics and compliance standards enforced for booking and confirmation processes (i.e. Rail and One-Time-Only (OTO) Ocean Booking) are not enforced.
- There is no knowledge management portal for processes and procedures. Such as how to ship unknown substances, documentation requirements and identifying legal / regulatory issues.
- The current procedure for ocean cargo booking modifications (increases, decreases, cancellations, etc.) within the Integrated Booking System (IBS) needs to improved. Changes in requirements after the initiation of movement are extremely difficult to achieve. The process is currently fractured with multiple operational and financial considerations involved in each request for a change in cargo destination. Current system is not applicable globally (this has since been fixed by deployment of IBS OCONUS in May 05).
- Direct Vendor Delivery (DVD) shipments lack visibility, unclear routing procedures, nodal processing procedures, and customs impact on delivery time. There are no Reception, Staging, Onward-movement & Integration (RSOI) processes to accommodate theater inbound commercial freight. There is no reliable means of receiving and rapidly processing DVD shipments.
- Shipping and routing policies and processes for Direct Vendor Delivery (DVD) shipments are unclear and insufficient without consideration of transportation priorities, operations and other situational constraints.
- Nodal policies and processes for receiving and processing of Direct Vendor Delivery (DVD) shipments arriving in theater do not adequately provide onward movement.
- Additional customs requirements are not always considered as part of the overall delivery time for commercial / Direct Vendor Delivery (DVD) shipments.
- Projected port throughput requirements insufficiently account for the peaks in shipments and the resulting lower productivity.
- There is poor visibility and movement responsiveness for non-DoD goods. Specifically, there is a lack of knowledge for accepting donations on behalf of the government and knowledge on how to request and sponsor Defense Transportation System (DTS) support.
- There is a lack of a clear / quick processes in accordance with the Defense Transportation Regulation (DTR) to address the knowledge and authority of movement of non-DoD cargo.
- There is a lack of understanding of doctrine, policy and processes for accepting privately donated and non-DoD cargo (i.e. Denton Amendment) on behalf of the government
- The escalation / authority paths to request and sponsor Defense Transportation System (DTS) support are unclear.
- The Joint and Combined Forces have a requirement to improve the manual and automated multi-modal (air, rail, truck, ocean and pipeline) booking Information Exchange Requirements (IERs). The current processes and procedures are poorly defined and not standardized.
- There is a lack of sufficient information for In-Transit Visibility (ITV) shipping instructions and customs clearance.

- Multiple surface booking systems have different rates and no clear purpose for each (Ex: Integrated Booking System (IBS), Direct Carrier Booking, etc.). Rail and One-Time-Only (OTO) ocean booking requests and confirmation processes lack standards for timeliness.
- Pallet build business rules (weight and cube utilization, pure vs. mixed pallets, etc.) are at odds with metrics such as pallet hold time. This causes unclear priorities: efficiency (cost) vs. effectiveness (speed).
- There is a lack of clear understanding between "cost-to-serve" and related "trade-offs" necessary to make optimal distribution decisions.
- Current capabilities do not allow discrete activities and costs (pallet break down, holding, frustration clearance, etc.) to be tied to shipments.
- Confused priorities for stakeholders at aerial ports and other key nodes feel driven by metrics to reduce hold time and are at odds with current guidance to maximize the use of pure pallets.
- No consistent communication of pallet build business rules exist that maximizes support to the warfighter at best value to the government.
- The DoD cannot optimize its fulfillment of customer requirements since it does not execute the receipt processes necessary to ensure inventory accuracy and accountability. Retail and final consignee receipts are typically not posted in a timely manner.
- Shipment lifecycle conclusion is not standardized with a consistent and timely receiving process.
- Generally, there is no pre-receiving process at nodes to allow reconciliation with stock record accounts for Supply Demand Reviews.
- The receipting and accountability processes are manpower intensive and not fully automated.
- The DoD lacks comprehensive procedures, checklists, decisions matrices, standard operating procedures (SOPs) and training for familiarity with specific actions regarding the Defense Transportation System (DTS) expansion / augmentation (e.g. forces and lift).
- Lack of understanding of the prepositioned vessel process delayed / hindered utilization of assets.
- Key transportation-related units, forces and capabilities to execute crisis response are delayed due to the lack of developed procedures with specific actions regarding their access.
- The Defense Transportation System (DTS) expansion / augmentation of lift assets is suboptimal without comprehensive procedures and communication of the identified decision windows for the Voluntary Intermodal Sealift Agreement (VISA), Civil Reserve Air Fleet (CRAF), etc. that drive our ability to meet Time-Phased Force Deployment Data (TPFDD) requirements.
- There is a lack of training regarding obtaining authority and control over Pre-Positioned (PREPO) vessels to properly utilize pre-positioned assets
- The training and knowledge transfer for the Defense Transportation System (DTS) expansion during Joint Chiefs of Staff (JCS) exercises is inadequate for distribution operators.

Sub-Gaps:

Process Description and Business Rules for Movement	1
Cargo Booking	2
Commercial Cargo Integration	3
Movement of Non-DOD Goods	4
Legal and Regulatory Updates – CLOSED 11/14/2013	5
DOD Activity Address Codes Management – CLOSED 11/14/2013	6
Cargo Screening	7
Pallet Build Business Rules	8
CL VIII Material Handling – CLOSED 12/22/2009	9
JDDOC Authorities – CLOSED 11/14/2013	10
Determine and Coordinate Convoy Security – CLOSED 11/14/2013	11
Mail Delivery – CLOSED 11/14/2013	12
Receipts and Accountability	13
Defense Transportation System (DTS) Expansion	14
Customer Returns – CLOSED 11/14/2013	15

6. Distribution Performance Metrics – CLOSED 04/19/2013

Distribution performance metrics are inconsistent, unclear, and insufficient. There are insufficient shared data sets, collaborative capability, or common metric scorecards. Different stakeholders require various levels of precision. No standard metrics or methods exist across supply chain organizations to evaluate performance.

Sub-Gaps:

Performance Measurement – CLOSED 03/24/2011	1
D2 Performance Assessment – CLOSED 03/19/2010	2
Collaborative Capability – CLOSED 03/19/2010	3
Carrier Performance and Availability – CLOSED 03/19/2010	4
Customer Service – CLOSED 01/05/2010	5

7. Container Management

The JDDE has a requirement to control and track containers and minimize detention fees globally. Current processes, systems, tools and/or performance metrics are not sufficient.

- Processes and systems to control and track containers and minimize detention fees are not sufficient.
- Current policies do not adequately address global container management.
- Carrier and container leasing contracts do not maximize compliance, quality or cost control.
- Currently, there is no common (i.e. not Regional Combatant Command (RCC) specific) information management for the container acquisition, transportation, disposition and other container management processes.

- There is no global organizational plan that portrays relationships among all the elements of the container management process including organizations, functions, timing, etc.
- Container marking, labeling and tagging processes are insufficient and inconsistently applied.

Sub-Gaps:

Global Container Management Policies	1
Common Information Management	2
Global Organizational Plan	3
Marking, Labeling and Tagging Processes	4

8. Contracts / Acquisitions Methodology – CLOSED 11/10/2010

Certain contract mechanisms and acquisition methods are inappropriate and unreliable.

Sub-Gaps:

Heavy Weight Commercial Tender – CLOSED 01/04/2010	1
CL III Transportation Responsibility – CLOSED 11/10/2010	2

9. Coalition / Multi-National / Interagency Capabilities

The JDDE community limits participation of other US government agencies and the transportation industry when conducting Joint and Combined exercises and simulation planning. Interaction with key national partners is seldom practiced during exercises. Key partners such as Department of State, MARAD, DLA, DESC, and the transportation industry are often excluded from exercise and simulation planning resulting in missed opportunities for valuable interaction and insight. The JDDE lacks the capability to generate, manage, share and distribute coalition/multi-national/inter-agency movement requirements.

- Interaction with key national partners is seldom practiced during exercises.
- Exercises seldom adequately stress all tasks / processes and do not include all stakeholders required to accomplish end-to-end (E2E) distribution.
- The C-days evaluated in current exercises are insufficient to test sustainment support and other follow on stakeholder requirements and relationships.
- All stakeholders are not included early enough in the exercise planning process.

Sub-Gaps:

Coalition / Multi-National / Interagency Movements – CLOSED 11/14/2013	1

10. Professional Joint Logistics Workforce Development – CLOSED 11/14/2013

The DOD does not have the requisite cadre of joint logisticians who understand the E2E

deployment and distribution process necessary to execute desired joint effects. There are no specific requirements for joint logisticians including competency models, career paths, and training requirements. The JDDE must expand the definition of joint logistics training to one that includes interagency, intergovernmental and multinational partners and more effectively uses innovative technologies.

Sub-Gaps:

Career Paths and Skill Specialty Designators – CLOSED 11/14/2013	1
COCOM E2E Competency Models and Bullets – CLOSED 12/07/2010	2
Knowledge Management – CLOSED 11/14/2013	3
Core and Specialty Training Curricula – CLOSED 04/02/2010	4
Operators' Motivation and Rewards – CLOSED 11/14/2013	5

11. Supply Chain Simulation Tools

Joint simulation tools are rarely used and poorly equipped or integrated into sustainment flow modeling at the strategic and operational levels (wholesale and Service-level retail). The Joint and Combined Forces have a requirement for simulation tools for sustainment flow modeling at the strategic and operational levels (wholesale and Service-level retail).
Current tools are rarely used and poorly equipped or integrated. There is little capability to do unconstrained "what-if" supply scenarios without manual effort. Operational Planners at Regional Combatant Commands (RCCs) have Force Flow modeling / simulation capabilities, but lack this capability for sustainment planning.

- Joint simulation tools are rarely used and poorly equipped or integrated into sustainment flow modeling at the strategic and operational levels (wholesale and Service-level retail).
- There is little capability to do unconstrained "what-if" supply scenarios without manual effort.
- Supply chain tools are inadequate for simulation of supply chain solutions / alternatives.
- There is no process or systems training for users to effectively build, reuse and develop robust / realistic supply chain models.

Sub-Gaps:

Organizational Constructs – CLOSED 11/14/2013	1
Supply Chain Tool Simulation Capability-Solutions	2
Process and System Training	3

APPENDIX 3

USTRANSCOM Research, Development, Test, and Evaluation Program
Project Selection Criteria

Award decisions will be based on a competitive selection of full proposals from subject matter experts and/or scientific/technical reviews.

1. JDDE GAPS, areas of interest, and focus areas that this proposal targets.
   a. Were high priority gaps targeted as listed in Appendix 1 and 2?
   b. What are the target JDDE GAPS, areas of interest, or focus areas?
   c. How do specific technological capabilities enhance distribution, transportation, planning/execution, and decision support processes?

2. Applicability to Joint Deployment Distribution Enterprise
   a. Transformational potential (versus "modernization")
   b. Joint capability crucial to DOD supply chain
   c. Not associated with major weapon system or end item acquisition program

3. Potential ROI and Affordability
   a. Shows significant positive ROI in lifecycle of application
   b. Demonstrates a compelling business case for use

4. Technical Merit: Utilizes sound scientific/engineering principles, assessed by pertinent experts.

5. Technical Maturity
   a. Project demonstrates Technology Readiness Level 4-6 at startup
   b. Project demonstrates TRL advancement commensurate with funded level of effort, but not beyond TRL 8 at conclusion

6. Programmatics
   a. Project plan demonstrates well-defined, defendable, and properly interrelated cost, schedule, and performance objectives
   b. Project is structured in achievable phases or spirals with clear deliverables
   c. Project demonstrates well-defined exit criteria, performance goals, and well-defined deliverables (studies, hardware or software prototypes, experimentation results, etc.

7. Technology Transition Potential
   a. Project has committed transition/integration agency, defined by provision of project manager or owning agency and identifies committed funding for next steps or transition to further development work.
   b. Project plan demonstrates adequate understanding of integration requirements if intended to transition to operational use, or presents clear methodology for determining those requirements during the course of research

APPENDIX 4

USTRANSCOM RDT&E Two-Phase Project Selection Process

Formats and Content for Proposals

The likelihood of the success of proposals will be increased by clearly demonstrating that the capability to be researched/developed covers an important need; that the proposer understands the Joint Deployment and Distribution Enterprise domain and its challenges; and the technical, programmatic, integration, and sustainment challenges of the proposed capability can demonstrate a positive return on investment; and has an experienced/skilled team of researchers who will do the developmental work.

Phase I requires submittal of a "white paper." White papers are four pages long with an optional appendix and are intended to minimize proposer initial documentation requirements. The white paper should summarize the full proposal and demonstrate succinctly that the concept is worthy of additional consideration for funding by the government.

Phase II requires submittal of a "proposal" (up to 20 pages). This portion of the process is only for successful white papers selected from Phase I. Proposals will include definitive technical, cost, and ROI analysis for USTRANSCOM to evaluate. Selection is dependent on sound analysis and is subject to the availability of funds.

(CONTINUED ON NEXT PAGE)

Phase I - White Paper (4-page limit)

A2.4. The white paper must be formatted as stated below. Submittal shall be in Times New Roman 12-point font. Lines may be single-spaced, though double-spaced is preferred. Pages shall include a 1-in margin at top, bottom, and both sides. A footer within the 1-inch bottom margin containing page number, submittal title, proposer's company name, and appropriate classification or proprietary notice shall be included. The cover page and optional two-page appendix are not included in the 4-page limitation.

A2.5. Section A: Cover Page (not included in 4-page limit). Include title of proposed project and acronym/short title, if appropriate; period of performance; estimated total cost and cost per year of performance; technical and contracting point(s) of contact, phone, fax, e-mail, date, company or agency name, and address; and notice of intellectual property content, security level, and other necessary markings; plus illustrations or logos as chosen by the proposer. This cover page itself should not contain proprietary or otherwise sensitive information.

A2.6. Section B: Project Description:

A2.6.1. Write a brief introduction describing what the RDT&E project will deliver. Acronyms spelled out on the cover page do not have to be repeated, but all other acronyms should be spelled out at first use (here and throughout document).

A2.6.2. Describe need being addressed/capability to be researched to demonstrate the proposer knows the domain and its challenges. Cite pertinent formal requirements documentation if it exists.

A2.6.3. Describe the maturity of the technology, including Technology Readiness Level (TRL) at project startup and intended TRL at conclusion of the described RDT&E effort to describe the scope of the research effort and its maturity at the end of the project.

A2.6.4. Describe anticipated return on investment (ROI) for implementing the proposed capability. A quantified ROI is required and should be calculated without excessive assumptions prior to the RDT&E effort; otherwise, a qualified ROI can be described only during Phase I of the process. Provide documented analysis for ROI as requested.

A2.6.5. List the science/engineering/supply chain or other principles which demonstrate that the proposal has technical merit and is likely to be able to solve the problem being addressed.

A2.6.6. List the performance metrics by which the RDT&E effort will be measured. This demonstrates the proposer comprehends the factors which dictate success for the effort.

A2.6.7. Describe instances where the technical approach has been used in industry or other non- DOD organizations.

A2.6.8. List the systems, corporate services, and/or programs of record with which this capability may be integrated, along with corresponding interfaces. State if there is already commitment by the Program Management Office of the system or program of record to incorporate the capability, once fully developed. This demonstrates that a transition destination has been considered. Identify initial transition planning methodology for the proposal.

A2.6.9. List the numbers and experience of the designated researchers or other individuals who will perform this work and the location(s) where work will be done. This demonstrates the level of expertise which will be applied. List the projects completed previously by the assigned researchers, providing telephone and organizational points of contact for the customer and/or user of the capability.

A2.6.10. List major deliverables of the project (mid-term or final reports, prototypes, analysis, etc.), a high-level schedule which includes these deliverables, and the funding proposed for each phase of the effort (including each fiscal year of the project's span). This demonstrates the proposer's technical/programmatic planning capabilities and understanding of the scope of the effort required.

A2.7. Appendix (not included in 4-page limit). The proposer may include a 2-page appendix, not included in the body page count, consisting of a diagram, photograph, or other visual aid to further describe the proposed RDT&E project and its deliverables, understanding of the domain and the place the technology will have in it, or other illustrative facts. This appendix is meant to be a visual aid or place for tables or lists, not additional room for the text of the proposal.

(CONTINUED ON NEXT PAGE)

Phase II - Proposal (20-page limit)

A2.8. This document is only required from proposers who are notified of the government's selection of their Phase I proposals.

A2.8.1. The proposal shall be formatted as stated below. Submittal shall be in Times New Roman 12-point font. Lines may be single-spaced, though double- spaced is preferred. Pages shall include a 1-inch margin at top, bottom, and both sides. A footer within the 1-inch bottom margin containing page number, submittal title, proposer's company name, and appropriate classification or proprietary notice shall be included and must be in 8-point Times New Roman font. Page limits within each element of the body of the proposal are recommendations; the proposer may utilize the 20 pages allotted as deemed best to describe the proposed project. The cover page and optional appendix are not included in the 20-page limit.

A2.8.2. Page limits listed in parentheses for the following sections are recommendations, and may be reallocated by the proposer, as necessary, within the 20-page limit.

A2.8.3. Cover Page. Include title and short title, point(s) of contact, phone number(s), fax and email, date, company or agency name, estimated total cost and cost per year of performance, and notice of intellectual property content, security level, and other necessary markings, plus illustrations or logos as chosen by the proposer. This cover page itself should not contain proprietary or otherwise sensitive information.

A2.8.4. General Project Summary (1 page):

A2.8.4.1. Describe the critical USTRANSCOM JDDE capabilities which the project addresses. Describe the current system/interface, capability, or process deficiency that the proposal addresses. Describe the operational gap or issue addressed and how the development effort contributes to the solution. Describe the specific deliverables of the RDT&E effort (for example, analysis, report, prototype, experimental results of demonstration, etc.)

A2.8.4.2. Identify the technologies to be explored/developed, the end user, and how the technology will enhance that user's capabilities. Consider including a mission scenario, vignette, or Operational View (OV-1) illustration here.

A2.8.4.3. List the information technology and/or hardware/platform/vehicle systems/corporate services/interfaces (potential programs or systems of record) with which the technology may be integrated.

A2.8.5. Requirements Traceability (2 pages):

A2.8.5.1. Identify the formal requirements, program directives, Joint Capabilities Integration and Development System products, Distribution Process Owner gap, or other formal source of requirements for the effort at the Joint or Service level. Higher priority will be given to those projects that address a Technology Need/Focus Area identified in the annual USTRANSCOM

RDT&E Call for Proposals. Proposals should address the applicable Joint Capability Area (JCA), Tier IV, Logistics, capabilities and will be evaluated against JDDE attributes, Key Performance Indicators (KPI) or Enterprise-level metrics, as outlined in the following paragraphs. If no Tier IV capability applies, then identify the appropriate Tier I and II capability area. Definitions can be found in Chairman, Joint Chiefs of Staff Instruction 3170.01 series, as well as USTRANSCOMH 60-2 for Tier I and II areas. Tier I and II JCA capabilities will be evaluated separately.

A.2.8.5.1.1. Expected operational uplift to the JDDE attributes listed below. For each attribute, provide a user-defined metric(s) supporting the proposed operational uplift, if applicable. The JDDE attributes are:

A2.8.5.1.1.1. Visibility: Visibility is the capability to determine the status, location, and direction of flow for all forces, requirements, and materiel in the JDDE. Joint end-to-end visibility is required over operational capabilities and capability packages, organizations, people, equipment, and sustainment moving through the pipeline. It also includes the organic military mobility forces and commercial augmentation that move people and things through the pipeline, the financial transactions that support them, and the modes and links comprising the pipeline. Visibility requires the availability of timely, accurate, and usable information essential to the maintenance of a common operating picture within the overall distribution enterprise information network.

A2.8.5.1.1.2. Reliability: Reliability is the degree of assurance of dependability that the JDDE will consistently meet its support requirements to specified standards. Reliability instills trust and confidence of the customer in the certainty that the enterprise will meet warfighter demands under clearly established and recognized conditions.

A2.8.5.1.1.3. Velocity: Velocity is the speed and direction at which requirements are fulfilled by the JDDE. Rapidity is only one aspect of velocity. Requirements must be fulfilled at the right speed. This means that synchronization of the speeds of the various aspects of the distribution process is required in order to maximize effectiveness. Velocity also incorporates the ability of elements of the JDDE to forecast, anticipate, and plan distribution execution. A JDDE that has sufficient velocity meets performance expectations and satisfies mission requirements, as defined by the supported commanders' concept of operations.

A2.8.5.1.1.4. Precision: Precision within the JDDE means the accuracy with which delivery of forces requirements and materiel occurs at the right time, the right place, and in the right amount. Precision also addresses the ability of the JDDE to minimize deviation from acceptable standards as it reacts to dynamically changing conditions and requirements.

A2.8.5.1.1.5. Survivability: Ability of an organization to prevail in the face of potential destruction. To ensure continuity of support, critical logistics infrastructure must be identified and plans developed for its protection. Survivability is directly affected by dispersion, design of operation logistics processes, and the allocation of forces to protect critical logistics infrastructure. Examples of critical logistics infrastructure include industrial centers, airfields,

seaports, railheads, supply points, depots, lines of communication, bridges, intersections, logistics centers, and installations.

A2.8.5.1.1.6. Economy: The amount of resources required to deliver a specific outcome. Economy is achieved when support is provided using the fewest resources within acceptable levels of risk. At the tactical and operational levels, economy is reflected in the number of personnel, units, and equipment required to deliver support. Among the key elements of the logistics principle of economy is the identification of unnecessary duplications and redundancies.

A2.8.5.1.1.7. Capacity: The capacity of the JDDE is defined by the physical quantity, size, mix, configuration, and readiness of its assets and infrastructure. Capacity is not a static attribute.

A.2.8.5.1.2. Expected uplift to JDDE Key Performance Indicators (KPI) or Enterprise level metrics listed below. For each KPI, address the expected uplift or impact, if applicable. The KPIs or Enterprise level metrics are:

A.2.8.5.1.2.1. Logistics Response Time: The average actual cycle time consistently achieved to fulfill customer orders. For each individual order, this cycle time starts from the order receipt and ends with customer acceptance of the order.

A.2.8.5.1.2.2. Perfect Order Fulfillment: The percentage of orders meeting delivery performance with complete and accurate documentation and no delivery damage. Components include all items and quantities on time using the customer's definition of on-time, and documentation – packing slips, bills of lading, invoices, etc.

A.2.8.5.1.2.3. Information Content and Quality: The status, completeness, and accuracy of information data exchanged from document date to receipt.

A.2.8.5.1.2.4. Total Supply Chain Costs: The fixed and operational costs associated with transportation costs, order management, materiel acquisition, inventory carrying, planning/finance, and information technology costs for deployment or distribution-related functions.

A.2.8.5.1.2.5. Latest Arrival Date (LAD) Performance: Latest Arrival Date, applied to force movements Time-Phased Force Deployment Data (TPFDD).

A2.8.5.2. Alternately, if no formal requirement can be identified (see A.2.8.5.1. above), identify any capability shortfalls from the USTRANSCOM RDT&E Handbook (USTRANSCOMH 60-2) not included in formal requirements documentation (previous criteria) that this project will address.

A2.8.5.3. If no formal source of requirements exists, clearly describe the vision and/or a proposed Functional Area Analysis/Needs Assessment that is being addressed. Cite any pertinent exercises, operational experience, and/or experimentation. Definitions of analysis

can be found in Chairman, Joint Chiefs of Staff Instruction 3170.01 series, *Joint Capabilities Integration and Development System*.

A2.8.6. Project Suitability (2 pages):

A2.8.6.1. Describe the anticipated results and the manner in which the work will contribute to enhancing joint defense distribution and/or transportation capabilities. Describe why the technology/capability sought is not purely a Service (Title 10) responsibility and, therefore, qualified for joint USTRANSCOM RDT&E funding.

A2.8.6.2. Demonstrate why the project is innovative/transformational and, therefore, worthy of joint RDT&E funding and not simply an upgrade or modernization of an existing capability. Show the TRL at project start and anticipated TRL at project conclusion.

A2.8.6.3. Describe what steps were taken to ensure the effort is not duplicative.

A2.8.7. Return on Investment (ROI), Affordability, and Business Case (5 pages):

A2.8.7.1. Although this effort is Research and Development, the proposer must demonstrate, at least quantitatively, that a favorable rate of return for the fielded capability is likely. A quantified ROI is more compelling than a subjective one. For projects of lower technological maturity, ROI/affordability can be based on broader assumptions and less-stringent criteria than would be expected for a go/no-go acquisition decision--as long as these assumptions are stated clearly. Where ROI/affordability of the fielded capability is tentatively projected at the outset, the research plan should explicitly contain activities to refine these measures and refresh the estimates at project completion. A business case for use should be described.

A2.8.7.2. Assumptions. List assumptions associated with tangible and intangible costs which are being made about the project which affect (or make possible) the calculation of ROI and affordability.

A2.8.7.3. Evaluation of Alternatives. Describe why this RDT&E effort is preferable to non- RDT&E approaches; list other courses of action (including non-materiel solutions) considered and why they are not recommended.

A2.8.7.4. Business Case for Implementation/ROI. If possible, quantitatively estimate the cost to implement the proposed capability (lifecycle cost including RDT&E, development/test, procurement, and sustainment) and lifecycle ROI. Describe any existing systems/interfaces which may be retired or personnel support which may be reduced (and thus operating costs saved) by use of the technology. Also describe estimating methods or data sources which were used and how they contributed to the credibility of the cost estimate.

A2.8.7.5. Applicability to Industry Practices and Partnerships. Describe, if possible, instances where the proposed technical approach has been used by industry (e.g., best or innovative practices) and how the capability, if developed and fielded in USTRANSCOM's

enterprise, may assist DOD in working more economically or seamlessly with its commercial and other supply chain partners.

A2.8.8. Technical Merit and Maturity (4 pages):

A2.8.8.1. Describe the technologies to be developed, their risks for fielding, and methods of better understanding or reducing those risks during RDT&E.

A2.8.8.2. State the assessment of experts regarding technical merit of the approach. Is the approach based on sound scientific/engineering principles likely to succeed in achieving stated capabilities? What are the qualifications of the experts who make that judgment?

A2.8.9. Programmatics (4 pages):

A2.8.9.1. Cost, schedule, and performance are interrelated. This section is meant to show the schedule of activities for the RDT&E effort with accompanying funding requirements for each segment of the project and its deliverables. See Atch 1, Section A, for references.

A2.8.9.2. Provide a detailed schedule, with start and end dates for major activities, appropriate decision point milestones, and completion dates for deliverables such as studies, prototypes, and other outputs of the research, for the entire project. Show links to other development efforts and to Programs/Systems of Record (P/SOR) to illustrate transition paths. If a project has already started, include any activities already completed. Include activities which support transition to further development, demonstration or acquisition, as appropriate. Attachment 7 outlines the minimum requirements for transition planning.

A2.8.9.3. Describe prior expended and requested funding for the RDT&E effort in then-year thousands. Include an estimate of follow-on development, production and sustainment costs. Recommended format (which may be included in the appendix) is in Figure A2.1:

Figure A2.1. Recommended Format – Lifecycle Funding Estimates.

$K, then-year	*FYXX*	*FYXX*	*FYXX*	*FYXX*	*FYXX*	*FYXX*	*FYXX*
Prior funding source (name)							
Requested USTRANSCOM R&D							
Estimated additional R&D							
Estimated development/test							
Estimated production/fielding							
Estimated Transition							
Estimated sustainment							

A2.8.9.4. Describe the team of experts which will be dedicated to conducting project technical/management activities, citing prior experience and qualifications.

A2.8.9.5. List similar prior RDT&E work performed for DOD or other government agencies, if any, and points of contact (name and phone).

A2.8.9.6. Describe performance metrics (Figure A2.2) to be used during conduct of the research and development effort. The RDT&E program reports these metrics on for each project in annual DOD-required budget documents). These metrics should be quantitative if at all possible or qualitative only by exception, and should be measurable at milestones during the course of the research with enough confidence to determine suitability for further research and development work and/or transition to additional development or even to the user. Describe the performance thresholds and/or exit criteria for each phase and end of the project, and TRLs at the beginning and conclusion of the RDT&E effort. Recommended format follows:

Figure A2.2 Recommended Format – Performance Metrics.

Metric Name	Description (and units)	Purpose of Metric (Decision supported)	Phase in Program Used	Minimum Acceptable (Threshold)	Desired Value(Objective)

A2.8.10. Technology Transition Planning (TTP) (3 pages): Each proposal must include a transition plan and must fulfill the minimum requirements outlined in attachment 7 of USTRANSCOM Instruction 61-1 (See RDT&E Web Page at www.transcom.mil/rdte/references.

A2.8.11. Appendix (4 pages). The proposer may include a 4-page diagram, appendix, photograph, or other visual aid, not included in the body page count, to further describe the proposed RDT&E project and its deliverables, demonstrate understanding of the domain and the place the technology will have in it, or other illustrative facts. This appendix is meant as a visual aid or place for tables or lists, not as additional room for the text of the proposal.