

**Joint Deployment Distribution Enterprise (JDDE)
Call for Government-proposed
Research, Development, Test and Evaluation (RDT&E) Projects, FY09-13**

United States Transportation Command (USTRANSCOM) is surveying government for RDT&E projects applicable to the JDDE to be funded beginning in FY09.

This is a two-phase selection process. Phase I requires submittal of a 4-page “white paper”. This phase is intended to avoid undue effort while providing sufficient material to generate interest by the JDDE subject matter experts (who must agree to sponsor the development effort and manage transition efforts). USTRANSCOM will evaluate white papers against the evaluation criteria stated in this announcement, on interest in sponsorship/transition, and on available funding.

If selected for Phase II, proposers will be requested to complete a full proposal for comprehensive evaluation, building from the white paper up to 20 pages, as required, and evaluated against the same criteria as Phase I. Proposers in this phase may request a meeting 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.

Deadlines are as follows:

| | |
|-----------------------------|--|
| 24 Jul 07 1600 Central time | -- Submittal of electronic white papers (to addresses below) |
| 7 Aug 07 | -- Notification of selection to proceed to Phase II |
| 5 Sep 07 1600 Central time | -- Submittal of electronic full proposals (to addresses below) |
| 18 Dec 07 | -- Notification of final selection (due 3 month collaborative vetting process) |

Appendix 1 contains the highest-priority needs identified by USTRANSCOM, its Service components, and the Joint Intermodal Working Group. Additional technology gaps are contained on RDT&E program website (<http://rdte.transcom.mil/>); however, proposals addressing Appendix 1 needs will compete best.

Unlike prior years, no parallel Broad Agency Announcement (BAA) to industry will be published. This is a result of experience showing that industry has a low probability of successfully proposing directly to USTRANSCOM; this is due to the challenge of finding sponsorship for projects not already deemed feasible and practical by a government research and development agency.

The total amount of funding available for all proposals is approximately \$9M in FY09 and \$12M in fiscal years thereafter.

Projects should be described in terms of the appropriate Technology Readiness Level (TRL). In general, projects should start at TRL level 4-6 at startup (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.

Proposals most likely to be chosen by the government will demonstrate a significant number of project selection criteria listed at Appendix 2. 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 the 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 through 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 USTRANSCOM/JDDE 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, Stanley Associates, Booz Allen Hamilton, SRA, and others) may act as advisors to the selection process. Contractors advising USTRANSCOM in this evaluation have already or will be required to sign non-disclosure agreements prior to accessing proprietary materials.

Formats for both Phase I and Phase II submittals are at Appendix 3.

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

Unclassified submissions should be addressed to:

mark.surina.ctr@ustranscom.mil

lou.bernstein@ustranscom.mil

pat.riley.ctr@ustranscom.mil

Points of contact (for classified submissions and/or additional clarity):

Mr. Lou Bernstein, USTRANSCOM TCJ5/4-AS, DSN 779-1470 (commercial (618) 229-1470), lou.bernstein@ustranscom.mil

Mr. Mark Surina, MITRE, USTRANSCOM TCJ5/4-AS, DSN 779-4108 (commercial (618) 229-4108), mark.surina.ctr@ustranscom.mil

Mr. Pat Riley, LMI Government Consulting, USTRANSCOM TCJ5/4-AS, DSN 779-1814, (commercial (618) 229-1814), pat.riley.ctr@ustranscom.mil

USTRANSCOM TCJ5/4-AS
508 Scott Drive
Scott AFB, IL 62225-5357

3 Appendices

1. Technology Needs/Focus Areas for FY09
2. USTRANSCOM RDT&E Project Selection Criteria
3. USTRANSCOM RDT&E Two-Phase Project Selection Process (contains format templates)

APPENDIX 1

Technology Needs/Focus Areas for FY09

- Command, Control, Communications, Computers, and Intelligence (C4I); includes:
 - Dynamic retasking of lift assets
 - Wireless net meshed in-transit visibility/total asset visibility capabilities
 - Information Sharing
 - Cross domain security—Need to move info between SIPR, NIPR , civil, joint and coalition in an automated manner
 - SIPR publish and subscribe capabilities
 - Service Oriented Architecture (SOA)
 - Load planning-- Explore load planning capabilities to the JDDE via a service oriented architecture.
 - Human-machine-platform integration—Develop human-machine interfaces that are more conducive to work process interaction
 - Linking shipping cost accounting data to the Transportation Account Code (TAC)— Develop a system that allows users to view the TAC that is associated with a particular shipment (Transportation Control Number) and captures the shipment costs
 - Senior leader command, control, and communication (C3) system airborne – Improve secure airborne communication capability for senior leaders
 - End-to-end supply chain visualization -- Explore the latest technologies in providing end to end movement tracking capability across the JDDE
- Vertical delivery (included continued refinement of aerial delivery capabilities). Technologies that improve air drop accuracy and delivery aircraft stand-off capability
- Mobility Air Force all-weather capability (not including previously-funded autonomous approach and landing)—Explore the latest technologies that increase world-wide weather data/forecasting, adverse weather airdrop, on-board wind detection to support airdrop missions, and Unmanned Aero Vehicle (UAV) wind measurement for airdrop
- Counter-chemical, biological, radiological, nuclear (only Distribution Process Owner-unique detection/protection solutions; does not include Service-provided individual protective equipment or garments). Technology focus is on initiatives that will reduce the impact of a CBRN attack on deployment/distribution flow
- Autonomous on/offload capability—Use of robotics to automate some port functions in order to improve port efficiency, reduce human error, and drive down cost
- Multi-modal transportation optimization and integrated transportation booking capabilities (maturing AT21). Develop a prototype that will determine best mode and schedule of transportation for a given set of requirements, available assets, and deployment/distribution scenarios. In addition, develop the capability to automatically communicate these schedules to deployment and distribution booking systems.

- Container security/tracking/content monitoring -- Technologies that integrate security, cargo status, and tracking devices that are tamper proof for containers and intermodal platforms. In addition, determine a method of predicting the maximum temperature an item stored or shipped in a container will experience while exposed to the most severe anticipated logistic environment.
- Expeditionary Theater Distribution-- Explore developmental improvements to initial portable deployment kit as joint solution for early entry capability
- Theater surface movement Joint requirement management capability– Explore capabilities to enable joint management of common-user requirements. Leverage existing technical platform(s) for joint requirement management.
- Predictive capability through statistical analysis—Access and analyze movement statistics in graphical format to predict near-term distribution performance and execution of future requirements

APPENDIX 2

USTRANSCOM RDT&E Project Selection Criteria

The following criteria are of equal importance. **Funding availability and interest generated in JDDE subject matter experts by the proposed capability are prerequisites to selection.**

1. Traceability to Formal Requirements
 - a. Mission Area ICD/ICD/CDD/DOTMLPF Change Recommendation package
 - b. Functional Area/Needs Analysis (FAA/FNA)
 - c. Lessons Learned
 - d. Joint Concept Development document (JOpsC/JOC/JFC/JIC)
 - e. Wargaming/Joint Experimentation results
2. Applicability to Joint Deployment Distribution Enterprise
 - a. Technology Needs/Focus Areas for FY09
 - b. Transformational potential (versus “modernization” or update)
 - c. Joint capability crucial to DOD supply chain
 - d. 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
 - a. 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. Programmatic
 - a. Project plan demonstrates well-defined, defensible, 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 3

USTRANSCOM RDT&E Two-Phase Project Selection Process

Formats and Content for Proposals

Likelihood of success of proposals in both phases will be increased by clearly identifying the outputs/deliverables at the end of the project, 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, the technical, programmatic, integration and sustainment challenges of the proposed capability, can demonstrate a positive return on investment for the effort, and has an experienced/skilled team of researchers who will be assigned to do the developmental work. Success is also enhanced by demonstration of a clear and logical transition path supported by a target system/program of record.

Phase I requires submittal of a “white paper”. White papers are maximum 4 pages in length with an optional appendix and are intended to preclude undue effort by a proposer. White papers will be evaluated against the evaluation criteria stated in this announcement; a determination will be made by the government whether to pursue the proposal further under Phase II. The white paper should generate interest, summarize the full proposal, clearly describe the “deliverables” and their maturity and demonstrate succinctly that the concept is worthy of additional consideration for funding by the government.

Phase II requires submittal of a “full proposal” of not more than 20 pages with optional appendix which amplifies the information summarized in Phase I white papers. This portion of the process is only for successful proposers selected from Phase I.

Phase I - White Paper (4-page limit)

The white paper must be formatted as stated below. Submittal shall be in Times New Roman font of at least 12 points printed in portrait format. 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 organization name, and appropriate classification or proprietary notice shall be included and must be in least 8-point Times New Roman font. The cover page and optional 2-page appendix are not included in the 4-page limitation.

Section A: Cover Page (not included in 4-page limit)

Include title of proposed project and acronym if appropriate, period of performance, estimated cost, technical and contracting point(s) of contact, phone, fax and 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.

Section B: Project Description (content by numbered paragraph or section):

1. Write a brief introduction describing what the project will deliver; clearly describe the deliverable(s) and their maturity. 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). Use this example format to summarize deliverables and timespans for their development.

| USTRANSCOM RDT&E Project Deliverables | | |
|--|-------------------|-----------------|
| Project Name/Originator | | |
| <i>Deliverable or Output</i> | <i>Start Date</i> | <i>End Date</i> |
| Engineering Study | | |
| Lab prototype | | |
| Simulation | | |
| Transition plan | | |
| Field prototype | | |
| User evaluation | | |
| Technical review | | |
| Final report | | |
| Program/System of Record integration | | |

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.

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.

4. Describe expected Return on Investment for acquiring the capability, if fielded. A quantified ROI is preferred if it can be calculated without excessive assumptions prior to the RDT&E effort; otherwise, a qualified ROI should be described.
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.
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 RDT&E effort.
7. Describe instances where the technical approach has been used in industry or other non-DOD government organizations.
8. List the systems or programs of record with which this capability must be integrated. If there is already commitment by the system or program of record to incorporate the capability, once fully developed, so state. This demonstrates that a transition destination has been considered early.
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 likelihood and 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.
10. List a high-level schedule which includes major deliverable and the funding proposed for each phase of the effort (including by each fiscal year of the project's span). This demonstrates the proposers' technical/programmatic planning capabilities and understanding of the scope of the effort required.

Appendix (not included in 4-page limit)

The proposer may include a 2-page diagram, not included in the body page count, consisting of an appendix, 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.

Phase II – Full Proposal (20-page limit)

This document is only required from proposers who are notified of the government's selection of their Phase I proposals. Proposals do not have to consume the entire 20-page limit; page limits listed in parentheses for the following sections are recommendations, and may be reallocated by the proposer as necessary.

The proposal shall be formatted as stated below. Submittal shall be in Times New Roman font of at least 12 points printed in portrait format. Pages shall include a one inch margin at top, bottom, and both sides. A footer within the 1-inch bottom margin containing page number, submittal title, proposer's organization name, and appropriate classification or proprietary notice shall be included and must be in least 8-point Times New Roman font. Page limits within each element of the body of the proposal are recommendations; the proposer may allocate the 20 pages allowed as deemed best to describe the proposed project. The cover page and optional appendix are not included in the 20-page limit.

Cover Page

Include title, point(s) of contact, phone numbers, fax and email, date, company or agency name, 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.

1. General Project Summary (1 page):

- a. Describe the critical USTRANSCOM Joint Deployment Distribution Enterprise capabilities which the project addresses and how the project responds to validated technology gap (either gaps identified in Appendix 1 {preferred} or additional gaps found at <http://rdte.transcom.mil/>). Describe the current system, capability, or process which is deficient and which this proposal addresses. Describe the operational gap or issue addressed and how the development effort contributes to the solution. Clearly describe the specific deliverables and maturity of the RDT&E effort (for example, analysis, report, prototype, experimental results of demonstration, etc.)
- b. 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.
- c. List the information technology and/or hardware/platform/vehicle systems (potential programs or systems of record) with which the technology must be integrated.

2. Requirements Traceability (1 page):

- a. Identify the formal requirements, program directives, Joint Capabilities Integration and Development System (JCIDS) products, Distribution Process Owner gap, Appendix 1, or other formal source of requirements for the effort at the joint or Service level. If none, clearly describe the vision and/or a proposed Functional Area Analysis/Net Assessment that is being addressed.

Cite any pertinent exercises, operational experience and/or experimentation. Definitions of analysis can be found in CJCSI 3170.01series, Joint Capabilities Integration and Development System.

b. Alternately, if no formal requirement can be identified, demonstrate linkage to capability shortfalls from the USTRANSCOM Transformation Technology Plan (T3P), located at <http://rdte.transcom.mil/>, that this project will address. Note: If there is no traceability to any of these documented sources, describe why the technology is so compelling as to warrant further consideration. Lack of clear requirements traceability puts the project at a considerable competitive disadvantage.

3. Project Suitability (2 pages):

a. 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, is qualified for joint USTRANSCOM Research, Development, Test, and Evaluation (RDT&E) funding.

b. Demonstrate why the project is innovative/transformational, therefore, worthy of Joint RDT&E funding and not simply an upgrade or modernization of an existing capability. Show the Technology Readiness Level (TRL) at project start and anticipated TRL and project conclusion.

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

4. Return on Investment, Affordability, and Business Case (5 pages): Although project is a developmental effort, the proposer must be able to 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 uncertain 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.

a. **Assumptions:** List assumptions which are being made about the project which affect (or make possible) the calculation of ROI and affordability.

b. **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.

c. **Business Case for Implementation/ROI:** If possible, quantitatively estimate cost to implement the proposed capability (lifecycle cost include RDT&E, procurement, and sustainment) as well as return on investment. Describe any existing systems 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.

d. Applicability to Industrial 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 the DOD in working more economically or seamlessly with its commercial and other supply chain partners.

5. Technical Merit and Maturity (4 pages):

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

6. Programmatic (4 pages): 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.

- a. Provide a list of major project deliverables and dates. Recommended format (entries are examples):

| USTRANSCOM RDT&E Project Deliverables | | |
|--|-------------------|-----------------|
| Project Name/Originator | | |
| <i>Deliverable or Output</i> | <i>Start Date</i> | <i>End Date</i> |
| Engineering Study | | |
| Lab prototype | | |
| Simulation | | |
| Transition plan | | |
| Field prototype | | |
| User evaluation | | |
| Technical review | | |
| Final report | | |
| Program/System of Record integration | | |

In addition, provide a detailed schedule, with start and end dates for major activities, appropriate decision points/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 Systems/Programs of Record 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.

b. Identify the organization(s) and address/point of contact to which project funds, once approved, should be forwarded for management/execution of technology proposal.

8. 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.