



United States Transportation Command

(USTRANSCOM)

Challenges & Opportunities

Improving Operational Effectiveness, Achieving Efficiencies, & Shaping Future Capabilities

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Approved for Public Release



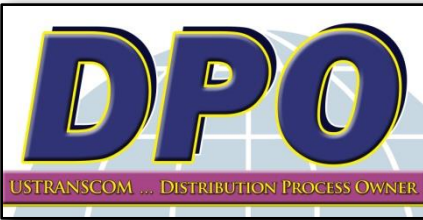
Overview



- **USTRANSCOM 101**
- **Research, Development, Test & Evaluation (RDT&E) Program**
- **RDT&E Focus Areas**
- **Sample Current Initiatives**
- **RDT&E Process / Partnership Opportunities**
- **Conclusion**



Mission



“USTRANSCOM Provides Full-Spectrum Global Mobility Solutions & Related Enabling Capabilities for Supported Customers’ Requirements in Peace and War.”

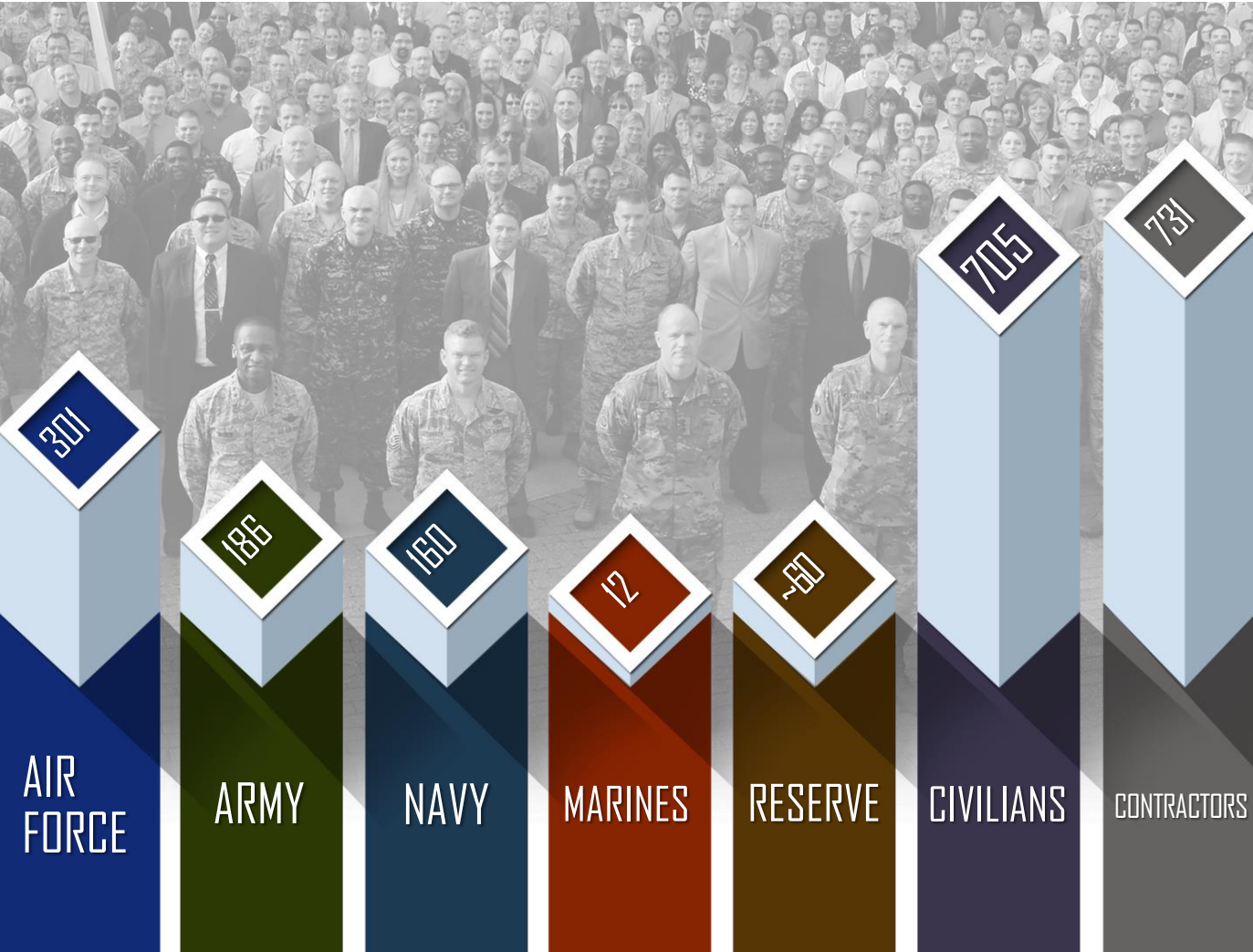


Unified Command Plan Responsibilities





USTRANSCOM Headquarters



TOGETHER, WE DELIVER.




Based on FY 15 military and civilian authorizations

Staff Total: 2162 Military, Civilians & Contractors

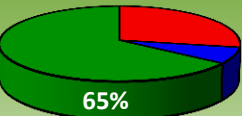


USTRANSCOM Team

Surface Deployment/Distribution Command

Force = 3,920



65%

Active Duty
Civilian
Guard/Reserve




Military Sealift Command

Force = 8,147



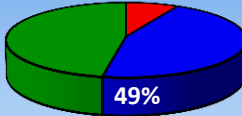
84%

Active Duty
Civilian
Guard/Reserve



Air Mobility Command

Force = 125,457



49%

Active Duty
Civilian
Guard/Reserve




Joint Enabling Capabilities Command

Force = 982






50%

Active Duty
Civilian
Guard/Reserve



Commercial Industry Contribution

~552 Aircraft
~375 Vessels

~140,000 People
\$8.5B in Revenue



Total Joint Effort



RDT&E Program Foundation



- **As the Distribution Process Owner (DPO), USTRANSCOM actively pursues collaborative partnerships to:**
 - Rapidly integrate deployment and distribution capabilities to improve Joint Deployment & Distribution Enterprise (JDDE) logistics effectiveness & efficiency
 - Provide tangible cost savings to be passed back to the DoD
- **Goals:**
 - Develop and deploy joint, relevant technologies to improve Warfighter support while reducing costs
 - Improve precision, reliability, visibility and efficiency of the DoD supply chain
 - Assure superior strategic, operational and tactical mobility support

**>\$500M Services/Agency/OSD leveraged;
>90% Transition Rate (DoD metric is 30%)**



RDT&E Program Foundation Basis



UCP: “Coordinating and overseeing the DoD distribution system to provide interoperability, synchronization, and alignment of DoD-wide, end-to-end distribution.”

PBD 703: “...need for a centralized R&D program for quick payoff technologies to enhance the efficiency and effectiveness of Defense distribution and transportation systems.”

DoDI 5158.06: “Enhance the DoD global distribution system by engaging in innovative and transformational distribution-related research, including force projection, sustainment, and redeployment/retrograde related research, ...”

Delivering National Objectives (TCCC Vision, Jan 2016):

- Ensure Today’s Readiness...Advocate for Tomorrow’s Capabilities...rapidly project forces anywhere...right investments ...to ensure we can deliver the Nation’s objectives tomorrow
- Advance Cyber Domain Capabilities...ensure our ability to operate in an increasingly contested cyber domain
- Evolve for Tomorrow...develop the technologies and ideas that maintain our Nation’s competitive advantage in transportation and logistics



RDT&E Focus Areas

GLOBAL ACCESS

- Rapid Distribution & Delivery Technologies
- Force Protection (cargo/equipment/lift assets/personnel)
- Sea Basing Technologies
- Rapid Construction/Port Opening
- Precision Airdrop/Aerial Delivery
- Opportune Landing Site Identification
- Autonomous Aircraft Approach & Landing

C2/OPTIMIZATION/MODELING & SIMULATION

- Deployment/Distribution Planning & Execution
- Predictive Forecasting
- Information Visualization
- Transportation Node Optimization
- Knowledge Management
- Manipulation of Large Data Sets
- Information S&T (analysis, assimilation & dissemination)



CYBER

- Cyber Security
- Information Assurance
- Identity Access & Management
- Human System Interface

<http://www.transcom.mil/cmd/associated/rdte/>

The screenshot shows the RDT&E website interface. At the top, there is a navigation bar with links for Home, Privacy, FAQ, Our History, and Contact Us. Below this is a search bar with a 'Go' button. The main heading is 'Transforming Defense Distribution'. A central text block states: 'The USTRANSCOM Research Development Test & Evaluation program explores innovative joint technologies that address Distribution Process Owner (DPO) and Defense Transportation System (DTS) capability gaps.' To the left of this text are four circular icons labeled 'Ongoing Projects', 'References', and 'Transitioned/Completed Projects/Capabilities'. To the right are three circular icons labeled 'FY17 Project Solicitation (government only)', 'Related Links', and 'Program Training'. At the bottom, there are five small image thumbnails, with the last one labeled 'RDTE Background'.



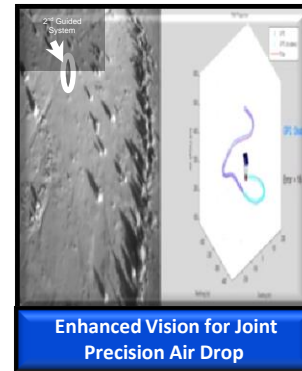
Global Access Initiatives



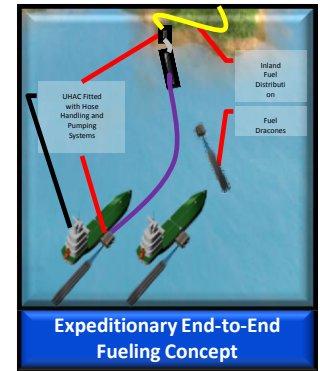
LAIRCM Enhanced Situational Awareness
Provide drop zone situational awareness, bundle geo-location and enhance single pass airdrop operations



Precision On-Demand Air Drop
Provide the Nett Warrior equipped Army Small Unit the ability to call and/or direct resupply



Enhanced Vision for Joint Precision Air Drop
Precision guidance/delivery of airdrop bundles in GPS denied environments



Expeditionary End-to-End Fueling Concept
Prototype modular pumping system to address over-the-shore & inland distribution needs while informing the Army E2E Fuel Distribution System



Joint Universal Causeway Interface Module
Universal/joint interface for disparate service connectors/causeways

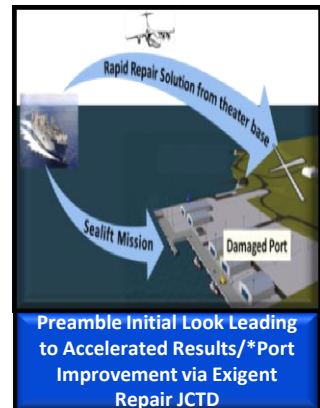


Joint Logistics Over-the-Shore Environmental Monitoring System
Provides an organic environmental monitoring capability



Dense Pack Access, Retrieval and Transit JCTD

Demonstrate innovative technologies for vessels to rapidly, selectively access/extract densely packed LWVs and TEU containers



Preamble Initial Look Leading to Accelerated Results/Port Improvement via Exigent Repair JCTD

Rapid repair capability to fix a damaged pier



C2/Optimization/Decision Support



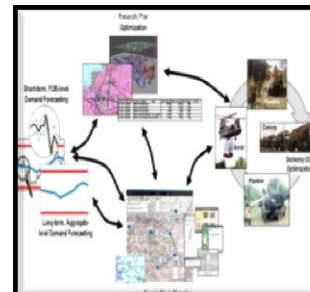
Global Mission Scheduling

Pairing air movement requirements and resources



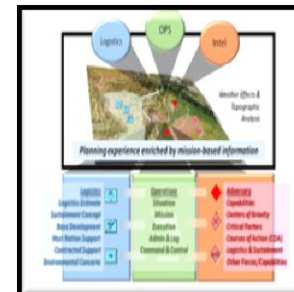
Support Planning for Aerial Refueling

Optimize air refueling planning and scheduling



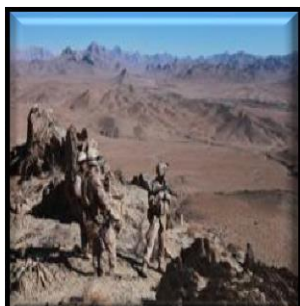
Sustain Plan & Optimized Resupply in Theater

Theater-wide bulk fluid rapid planning capability supporting conveyance (ground/air) & non-conveyance (pipeline/hoseline) delivery



Map Based Planning System

Collaborative geospatially enabled capability for CCMD planners to rapidly develop multiple COAs & conduct deliberate planning



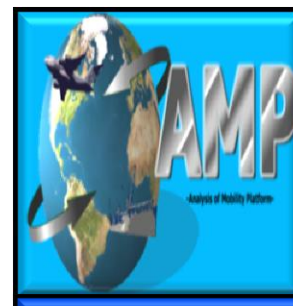
Predictive Analysis for Maintenance and Log

Forecasts of parts/supplies and maintenance requirements of tactical equipment



Class IX Demand Forecasting

Exposing previously hidden demand pattern dynamics/variability so they can be dealt with proactively



End-to-End Distribution Modeling

Enhance E2E modeling and sensitivity analysis to optimize force projection, distribution & redeployment capabilities



Analytics Driven Command Decision Support

Enhance organizational decision making by providing a holistic methodology

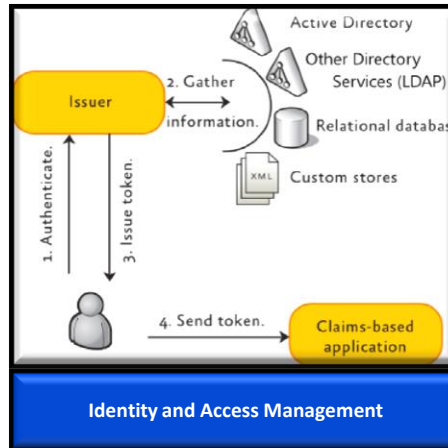


Cyber



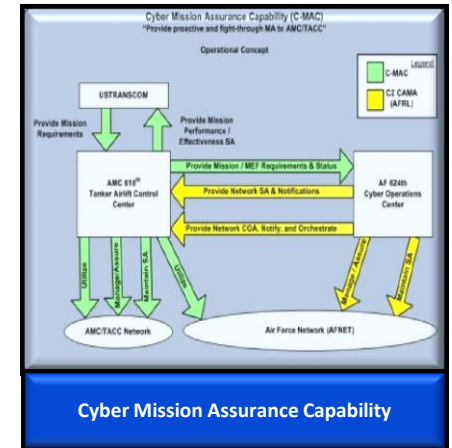
Operationalizing Cyber Security

Assess and align people, processes and tools to support Joint Cyber Center Operations



Identity and Access Management

Credentialing solutions for open standards based identity providers

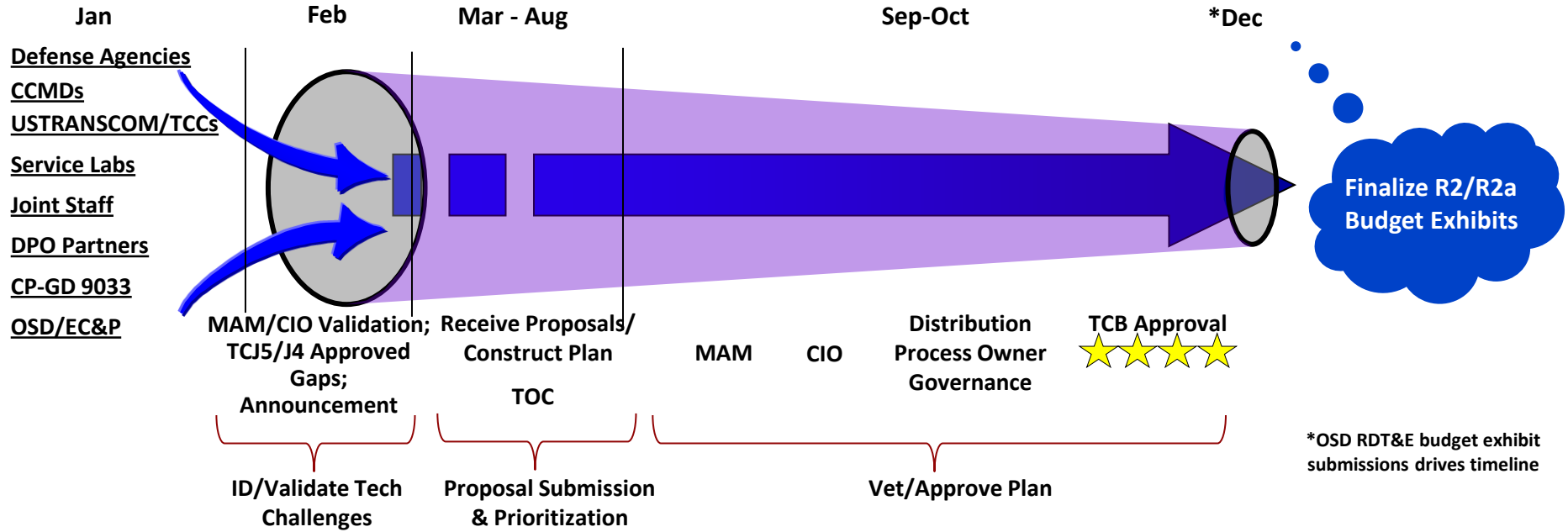


Cyber Mission Assurance Capability

Recognize events & implement responses to address threats & minimize mission impact



RDT&E Process / Partnership Opportunities



- ✓ 31 Mar Submittal of electronic Phase I white papers
- 1-28 Apr Phase I evaluation period
- 2 May Phase II notifications
- 30 Jun Submittal of electronic Phase II proposals
- 31 Oct Notification of final selection

*OSD RDT&E budget exhibit submissions drives timeline

Acronyms:
 CIO – Chief Information Officer
 MAM – Mission Area Manager
 CCMD – Combatant Commands
 OSD – Office of the Secretary of Defense
 DPO – Distribution Process Owner
 TCB – TRANSCOM Corporate Board
 EC&P – Enabling Capabilities & Prototyping
 TOC – TRANSCOM Oversight Council



RDT&E Info (<http://www.transcom.mil/cmd/associated/rdte/>)



Questions

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or email the USTRANSCOM RDT&E Team at transcom.scott.afb.tcj5j4.list.rdte@mail.mil