C A S C O M

Providing unrivaled sustainment capabilities to meet the needs of our Army

2014 NDIA TWV Conference

6 May 2014

Where Army Sustainment is Headed

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U.S. Army Combined Arms Support Command

Support Starts Here!
Agenda

- Army Vision
- Globally Responsive Sustainment
- Army 2020
- Enterprise Resource Planning
- Science and Technology
- Way Forward Q&A
To meet demands of the future strategic environment in alignment with strategic vision and priorities, the Army must make formations leaner while retaining capability, become more expeditionary, prevent overmatch through 2025, and set conditions for fundamental change by 2030-40.

By 2025, the Army must operate differently, enable differently, and organize differently to maintain overmatch and to set the conditions for fundamental long-term change.

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Globally Responsive Sustainment: Optimizing the Sustainment Enterprise

A Unified Sustainment Warfighting Function

Inform policy and strategic priorities

Address inherent sustainment complexities across all Warfighting Functions

Promote collaboration across Total Army/joint partners/Institutional and Operational force

Develop agile and adaptive sustainment leaders, Soldiers and civilians

Ensure greater efficiency and effectiveness pursuant to fulfilling Title 10 obligations

Optimizing Sustainment in support of an Expeditionary Army

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Army 2020

Major Army 2020 Ideas

- Redesign Brigade Combat Teams (DP 1)
- Review Logistics Concept of Support (DP 15)
- Implement a New Tactical Wheeled Vehicle Strategy (DP 11)
- Create a New ARFORGEN Model
- Maintain an Operational Reserve
- Create Reconnaissance and Surveillance Brigades
- Project Power Despite Anti-Access/Area Denial Challenges
- Create Regionally Aligned Forces
- Integrate Special Operations and Conventional Forces
- Improve Echelons Above Brigade (EAB) Mission Command
- Enhance Army Advisory Capability
- Assign / Align Brigades to Divisions and Corps
- Ensure Reversibility and Expansibility

Capabilities Removed From Brigade Combat Team (DP 1)

- Transfer Organic Infantry Transport to EAB* in IBCT
- Transfer Distribution haul to EAB in A/I/SBCT
- Transfer Water Production in A/I/SBCT
- Transfer Fuel Distribution & Fuel System Supply Point (FSSP) in A/I/SBCT
- Remove COLTs in A/I/SBCT
- Transfer BEB Vertical Construction PLT, SPT SQUAD from Horizontal PLT and associated sustainment to EAB in A/I/SBCT
- Transfer MP PLT to EAB in A/I/SBCT

- New Sustainment Designs
- Flexible – Modular – Robust

Complete by 2015
ERP Employment Strategy

CSA’s Strategic Priorities – A Globally Responsive and Regionally Engaged Army

DECISIVE ACTION

- Extended Operational Reach
- Prolonged Endurance
- Freedom of Action

Globally Responsive Sustainment Strategy

Army Business Transformation

IPPS-A GCSS-A GFEBS

Benefits to Tactical Commander (real time)
Make timely tactical decisions in high OPTEMPO environments /
Eliminate multiple systems / Confirm operational readiness / Task
organize effectively and efficiently / Move resources and associated data
across organizations / Integrate personnel readiness / Integrate equipment
readiness / Provide budget visibility / 360 degree asset visibility

Benefits to the Army
Improved Readiness, Auditability, Efficiency

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Imagine This…

Conceptual Application -- Moving the Enterprise Forward

- Digitally Linked Supply Chain
- Battlefield Part Production
- Autonomous Transport
- Water Produced at Consumption Points
- Advanced Power Generation and Management
- Improved Reliability and Maintainability
- Point-Point Unmanned Aerial Resupply

**FORCE 2025**
- Leaner, more lethal, expeditionary and agile force
- Conduct decentralized distributed and integrated ops
- Retain overmatch and prevent, shape and win
The Total Army Challenge: **Reduce Demand**

- Demand determines sustainment requirements
- Reducing demand increases expeditionary capability

**How do we get from this...**

- **Sustainment Requirements**
- **Expeditionary Capabilities**

**To This?**

- **Sustainment Requirements**
- **Expeditionary Capabilities**

**Operationalize S&T and Reduce Demand**

**Capability Requirements**

- Automate Soldier Tasks
- Produce at the point of need
- Reduce demand & increase capabilities
  - Change demand characteristics
  - Improve reliability & maintainability

**Potential Benefits**

- Reduced sustainment requirements
- Increased expeditionary capabilities
- Offer senior leader options
- Shape S&T investment strategy

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S&T Solution Candidates

Top *Game-Changing* Technologies

### Autonomous Mobility (AMAS)
*Solution: reduce Driver/TC demand*
- Full & Semi-Autonomous Potential
- Changes dynamics of convoy ops
- Limitation: cultural resistance (trust)

### Cargo Unmanned Aerial Systems (UAS)
*Solution: increase expeditionary capability*
- Increases delivery frequency
- K-Max capacity: 4,500 lbs at 12K ft
- Limitation: prioritization & funding

### Additive Manufacturing (AM)
*Solution: meet demand at point of need*
- Decrease supply chain demand & ASL lines
- Advanced Medical Applications
- Limitation: policy and design rights

### Water from Air
*Solution: meet demand at point of need*
- 7.5 ton trailer mounted system
- Rate: 5-24 gal/h
- Limitation: fuel to water ratio

### Advanced Power Generation
*Solution: reduce energy demand*
- Minimal maintenance
- Clean/Quiet/Continuous operation
- Limitation: weight to power ratio

Yielding the *Potential Benefits*

- Increased Range
- Integrate tooth-tail
- Lighter Platforms
- Greater Payload
- Point-to-Point Rapid Delivery
- Demand at Point of Need
- Unmanned Resupply
- Energy Efficiency
- Reduced ASL

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 Force 2025

- Increase Force Protection
- Support Expeditionary Warfare
- Improve Deployability
- Offer Force Shaping Options

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Autonomous Mobility Appliqué System (AMAS)
Joint Capability Technology Demonstration (JCTD)

**AMAS JCTD Background and Requirements**

- Congressionally approved 2-Year JCTD effort
- Develop appliqué for current Light, Medium and Heavy Wheeled vehicles
- Provide varied Levels or “Modes” of autonomy
- Provide ability to operate with or without occupant in cab
- Ability to operate in day/night, inclement weather, and limited visibility
- Increase safety, situational awareness, force protect, operational energy

**AMAS JCTD Basic Timeline**

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<tr>
<td>SSEB Review Complete</td>
<td>07 JUN 12</td>
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<tr>
<td>Congressional Funding Rcvd</td>
<td>02 AUG 12</td>
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<td>Award Contract</td>
<td>11 SEP 12</td>
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<td>Site Survey Complete</td>
<td>02 AUG 12</td>
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<tr>
<td>JCTD Complete/Leader-Follower Addendum to PLS CPD to HQDA MUA Report</td>
<td>19 SEP 14</td>
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<tr>
<td>CAD I</td>
<td>16 – 29 MAY 14</td>
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<td>CAD II</td>
<td>21 APR – 16 MAY 14</td>
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<td>Military Utility Assessment</td>
<td>7 JUL – 15 JUL 13</td>
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**JCTD Specifics**

- **OSD** = Oversight Executive
- **CENTCOM** = Operational Manager for overall execution of JCTD
- **CASCOM** = Deputy Operational Manager in support of CENTCOM
- **TARDEC** = Technical Manager for developing the technology
- **Robotics System JPO** = Transition Manager for transitioning to POR

**Goals:**

**Year 1: Integrate and Deploy Appliqué System**

Operation: Convoy w/2 Each MTVR, LMTV, PLS, and M915 w/trailer.
Capability: Driver Assist, Leader/Follower

**Year 2: Increase levels of Autonomy and Expand Platforms**

Operation: Extend to MRAP, HMMWV, FMTV, and HET w/trailer
Capability: Enhanced Driver Assist, Limited Tele-Operations
Semi Autonomous Leader, Waypoint Navigation

**Technology:** Scalable Autonomy, Self Calibrating LRUs, Improved Standardized Metrics and Test Procedures,

**Complete Military Utility Assessment – JUL-AUG 2014**

**JCTD Transition**

- Two-year effort completed with final report in Sep 14
- Fieldable Prototypes for the Army and USMC
- JCTD software capabilities could spiral into other developmental automated ground platform
- Staffing of leader-follower addendums to medium and heavy TWV CPDs beginning this summer (Jun 14)
- Automated Convoy Operations CDD = Establish POR (Pre-MS A MDD Q4 FY14)
What I Want to Leave You With

**Force 2025 and Beyond: A holistic modernization strategy to fundamentally change the Army**

**GRS: A Unified Sustainment Strategy to meet the CSAs Intent**

**Army 2020: The baseline for future refinements**

**Game-Changers: Reducing demand, automating tasks- producing at the point of need**

**The objective: a leaner and expeditionary Army with equal or greater capability**