



# J-6 Information Operations

**Defense Logistics Management  
Standards Office**

**Supporting the Warfighter Today**

**and the**

**The Future Logistics Enterprise Tomorrow**

**UID & Property Management Systems Workshop**

**June 22-23, 2005**

<http://www.dla.mil/j-6/dlmsa/>



# Defense Logistics Management Standards Office (DLMSO)

- **Purpose/Mission**
- **Interoperability**
- **Core Mission Responsibilities**
- **Governing Policies**
- **Logistics Business Change Process**
- **Current Focus Areas**
- **DLMSO Support of UID & RFID**
- **UID, RFID, & DLMS Relationship**
- **Summary**



# Purpose/Mission

Business Process Transformation  
Process Reengineering  
Reinvention  
Net-Centric Operations  
Customer Focused  
Support

## SUPPLY CHAIN INTEROPERABILITY

Performance Based Logistics  
Enterprise Architecture  
Information Superiority  
Best Business  
Focused Logistics





# Interoperability of What?

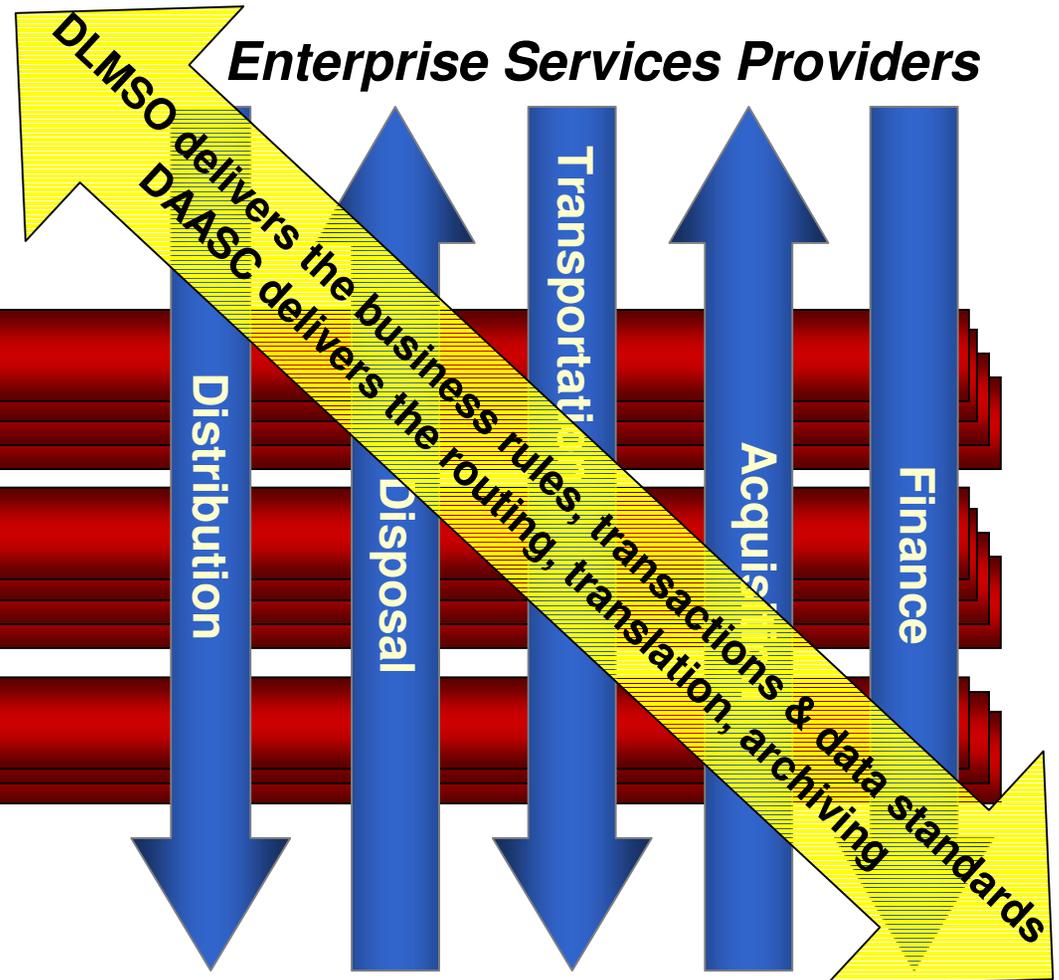
## Supply Chains

Commodities

Weapon Systems

Others

24 x 7



**Challenge: To Connect Supply Chains & Enterprise Services Providers on a DoD-wide Basis**



# Interoperability Framework

- **Business Policy**: A required outcome – *Property stewardship*
- **Business Process**: An assemblage of business rules that collectively form a process -- *Physical Inventory Management*
- **Business rule**: States what must or must not be done  
*Storage Activities must report the ending on-hand inventory balance to the item owner for all items having any balance effecting business activity that day.*
- **Business Object**: A collection of data in a specified format that launches a business process or reports process results  
*An order, inventory adjustment, request for payment, etc.*
- **Business Metadata**: Data element characteristics  
*Inventory Balance Date = 8 numeric characters (yyyymmdd)*



# Core Mission Responsibilities

## Business Process Transformation & Interoperability

- Facilitate enterprise integration and continuous process improvements to logistics management and operations while maintaining interoperability by:
  - Developing business rules that implement DoD policy
  - Developing and managing the DoD logistics information exchange infrastructure
  - Publishing detailed procedures that identify who does what, when, and how along the DoD logistics chain:
    - Organizational responsibilities
    - Metrics
    - Information exchange formats
    - Standard data elements and codes





# Key DoD Governing Policies

- Wynne 22 Dec. 2003, Memo, Migrate to DLMS, Eliminate MILS
- DoDD 8190.1, DoD Logistics Use of EDI Standards:
  - Assigns DLMSO as DoD Executive Agent for logistics data interchange
  - Establishes ANSI ASC X12 as DoD standard for logistics system interchanges:
    - All new systems
    - Major modifications to existing systems
- DoDD 4140.1 Materiel Management Policy
  - Authorizes publication of DoD business rules and standards
- DoD 4140.1-R Materiel Management Regulation
  - “Loaded” with DLMSO responsibilities, policy, procedure, and guidance
- DoD 4000.25 series of Manuals covering both the DLMS and DLSS/MILS (8K pages)
  - Prescribes logistics management policy, responsibilities, procedures, rules, and electronic data interchange and data standards



**Business rule and standard operational development and implementation are well grounded in DoD policy**



# Transforming Policy to Business Rules and Standards

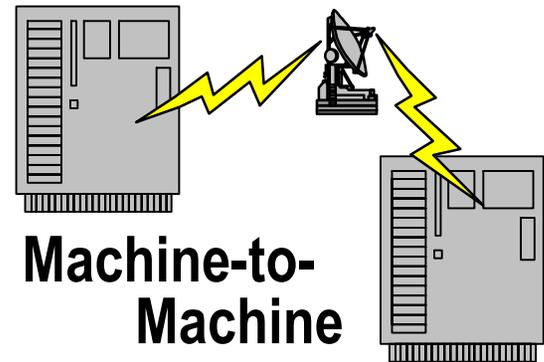
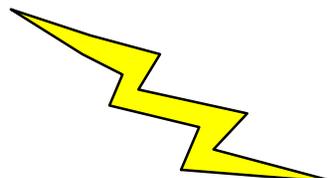


DoD 4140.1-R...Ensure accurate property...records for the physical inventory are maintained in support of customers requirements and readiness by performing physical inventories and location surveys/reconciliations.

DoD 4000.25-M, Vol 2 (28 pages of detailed business rules that support DoD policy)... C6.3.8.1.1 Requested Inventory. When the owner/manager has requested an unscheduled inventory...the owner/manager will initiate a follow-up using DS 846P which cites Management Code X...from the DS 846P that established...



## Person-to-Person



DS 846P Supplement to Federal E: 5401 Physical Inventory (Request)	
<b>846</b>	<b>Inventory Inquiry/Advice</b>
<b>Functional Group: IE</b>	
This Data Standard for Trial Use contains the format and establishes the data content of the Inventory Inquiry/Advice Transaction Set (DS 846) to be used within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used in the following ways: (1) for a seller of goods and services to provide inventory information to prospective purchasers, with no obligation to the purchaser to accept these goods or services; (2) for a representative of a seller of goods and services to supply inventory information to that seller; (3) for one location to supply another location with the necessary information; and (4) for an inquiry as to the availability of inventory with no obligation on the seller of goods and services to reserve that inventory.	
<b>Notes:</b>	
2100: The DS 846P covers serial numbers, lot numbers, and unit numbers.	
2101: Number of lots (LTS) (C7T1) is the summation of number of LSN segments. If used, both lots (C7T1) and the sum of the values of the quantities (Q7T1) of each QTY segment.	
<b>Federal Note:</b>	
1. Government managers use this transaction set to request, receive, advise, and cancel a status of inventory by a distribution point or storage activity. Government managers may also use this transaction set to provide a distribution point or storage activity with an inventory activity generated request for service activities, physical inventory activities, Government managers use this transaction set for requests for service activities.	
2. The use occurrence of this transaction set to transmit a single or multiple transactions.	
3. DS 846P requires users should refer to the Defense Logistics Management System (DLMS) Supplement in the Federal Implementation Convention (FIC) available at <a href="http://www.dla.mil">www.dla.mil</a> for more information. The DLMS Supplement provides specific business rules, coding and other information necessary for implementation of this transaction set.	
<b>DLMS Note:</b>	
1. Distribution point/warehouse activities use this transaction set to cancel a single or multiple unscheduled inventory request by an owner/manager. Distribution point/warehouse activities also use this transaction set to request for a request for inventory history and to request advice for a physical inventory.	
2. The single occurrence of this transaction set to exchange information between a single owner/manager and a single or multiple distribution point/warehouse activities, or between a single distribution point/warehouse activity and a single or multiple owner/managers.	
3. Users operating under the Defense Logistics Management System (DLMS) must reference the User's Guide and Purchase Order Management Guide and the Accounting Classification Appendix which can be found on the Defense Logistics Management Standards (DLMS) website at <a href="http://www.dla.mil">www.dla.mil</a> .	
4. The DLMS Supplement contains:	
a. Data associated with a DLMS requirement which may not be received or understood by the recipient's automated processing system. DLMS requirements may have been developed. Components must coordinate requirements and data associated with DLMS prior to use.	
b. Data associated with an approved change which may not have an established implementation date. This data may not be received or understood by the recipient's automated processing system. Components must coordinate requirements with DLMS prior to use.	
c. Defense Logistics Standard System (DLSS) data which may be used in the DLMS for a transaction period to support transaction completion in a DLMS/DLMS environment. This data may not be understood or processed by DLMS requirements or related components may coordinate with DLMS for any limitations (or variations) of specific data requirements for users operating in a DLMS environment.	
d. Data elements which may not be understood by the recipient's automated processing system. Components must coordinate requirements with DLMS prior to use.	
DS 846P Supplement 1 March 27, 2008	



# Process Inputs & Outputs

## INPUTS

OSD Policy Guidance  
Trading Partner  
Requirements & SMEs  
DLMSO SMEs &  
Technical Expertise  
DAASC Technical  
Expertise

Structured  
Collaboration  
Model

**DLMSO  
MANAGED  
TRANSFORMATION  
PROCESS**

Artful  
Negotiation  
& Consensus  
Builders

## OUTPUTS

Fully Staffed &  
Approved

- Business Rules
- Business Objects
- Meta Data
- Functional Reqts.



# Supporting Business Transformation Current Focus Areas

- **Migrating DoD unique information standards to commercial Federally mandated standards (DLMS Migration)**
- **Unique Item Identification (UID) Initiative**
- **Radio Frequency Identification Tag (RFID) Initiative**
- **Supporting Component System modernizations (Enterprise Resource Planning (ERP) support)**
- **Implementing new technology solutions**
  - **Support to the Integrated Data Environment (IDE)**
  - **Business Rule Repository (BR<sup>2</sup>)**
- **Intra-governmental transactions initiative**
- **Supply Discrepancy Reports (SDRs) process transformation**
- **DoDAAD Reengineering**



# Migration From MILS To DLMS

## **What are the MILS Transactions?**

- DoD unique EDI standard developed 40 years ago
- Fixed length (80 positions) transactions (over 500 types)
- Each transaction contains fixed length data fields
- Technically obsolete
- Serious constraint to business process improvements
- **Can not support UID and RFID data exchange requirements**
- 11 million daily computer-to-computer exchanges via DAASC



# Migration From MILS To DLMS

## What are the **DLMS Transactions**?

- Commercial EDI standard based transactions
  - ANSI ASC X12 EDI implementation conventions (ICs)
  - W3C compliant XML schemas
- 57 X12 EDI ICs and XML schemas support all MILS functionality
- Variable length transactions and data fields
- Flexible enough to meet all current & DoD future business information requirements – **supports UID and RFID**
- 1/2 million daily computer-to-computer exchanges via DAASC



# Where To Find The DLMS Transactions

- **DLMSO Web Site PDF**

- ✓ DLMS X12 <http://www.dla.mil/j-6/dlms/eLibrary/TransFormats/x12.asp>
- ✓ DLMS XML Schemas  
<http://www.dla.mil/j-6/dlms/eLibrary/TransFormats/xml.asp>

- **DLMSO Web Site Links To:**

- ✓ DoD XML Repository <http://xml.dod.mil/xmlreq/user/index.cfm>
- ✓ DLIS XML Resource Library (XRL) <https://www.dlis.dla.mil/xrl/>



# Migration From MILS To DLMS

**What help is available to assist in migration**

- **DLMSO & DAASC**
  - **Functional and technical consultation**
  - **Training**
  - **DAASC mappings between MILS and DLMS data**
  - **Test Transactions**
  - **Coordinate system-to-system testing**
- **DLA & USAMMA experience & lessons learned**
- **DLMSO Web Site** <http://www.dla.mil/j-6/dlms/>



# DoD Vision for Unique Item Marking

- **To implement a policy establishing a strategic imperative for uniquely identifying tangible items relying to the maximum extent practical on international standards and commercial item markings and while not imposing unique government data requirements.**
- **Uniquely identified (UID) tangible items will facilitate item tracking in DoD business systems and provide reliable and accurate data for management, financial, accountability and asset management purposes.**

**<http://www.acq.osd.mil/dpap/UID/>**



# Unique Identification (UID)

UID is . . .

**. . . the set of data for tangible assets that is globally unique and unambiguous, ensures data integrity and data quality throughout life, and supports multi-faceted business applications and users.**

EID 12V194532636

Orig. Part No. 1P1234

Serial No. S786950







# AIT Media / Devices

## OMC

### Optical Memory Card

Uses the same basic technology as a CD-ROM. The OMC is the size of a credit card, can store up to 2.4 MB of useable data, and is disposable. It uses WORM (Write Once Read Many) technology. Because the device cannot be erased, this feature provides a permanent audit trail for recorded data. It withstands harsh environments and is relatively inexpensive



Optical Memory Card

## Smart Card/CAC

Previously known as Integrated Circuit Card, the Smart Card is about the size of a credit card. It is embedded with an electronic chip that can store 8 to 32 Kilobytes of data. It can also contain other AIT media, like magnetic strips or bar codes. DoD uses smart cards for personnel functions like controlled access to buildings or personnel manifesting. A spin-off of smart card technology is the *Common Access Card* (CAC) that is currently being implemented throughout DoD as a common ID card.

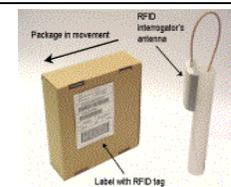


## RFID - Active Radio Frequency ID



RFID can remotely identify, categorize, and locate materiel automatically (i.e., without human intervention). When used in conjunction with hand-held interrogators, RFID tags provide "in the box" visibility to the Army. Data are digitally stored on RFID tags (radio transceivers with memory units). Data capacity of the tag is up to 128 Kilobytes and information can be retrieved from distances of up to 300 feet away using strategically placed electronic *interrogators* to identify their exact location and relay the data via wired or wireless technology. Supporting infrastructure is expensive to install and maintain.

## RFID- Passive Radio Frequency ID

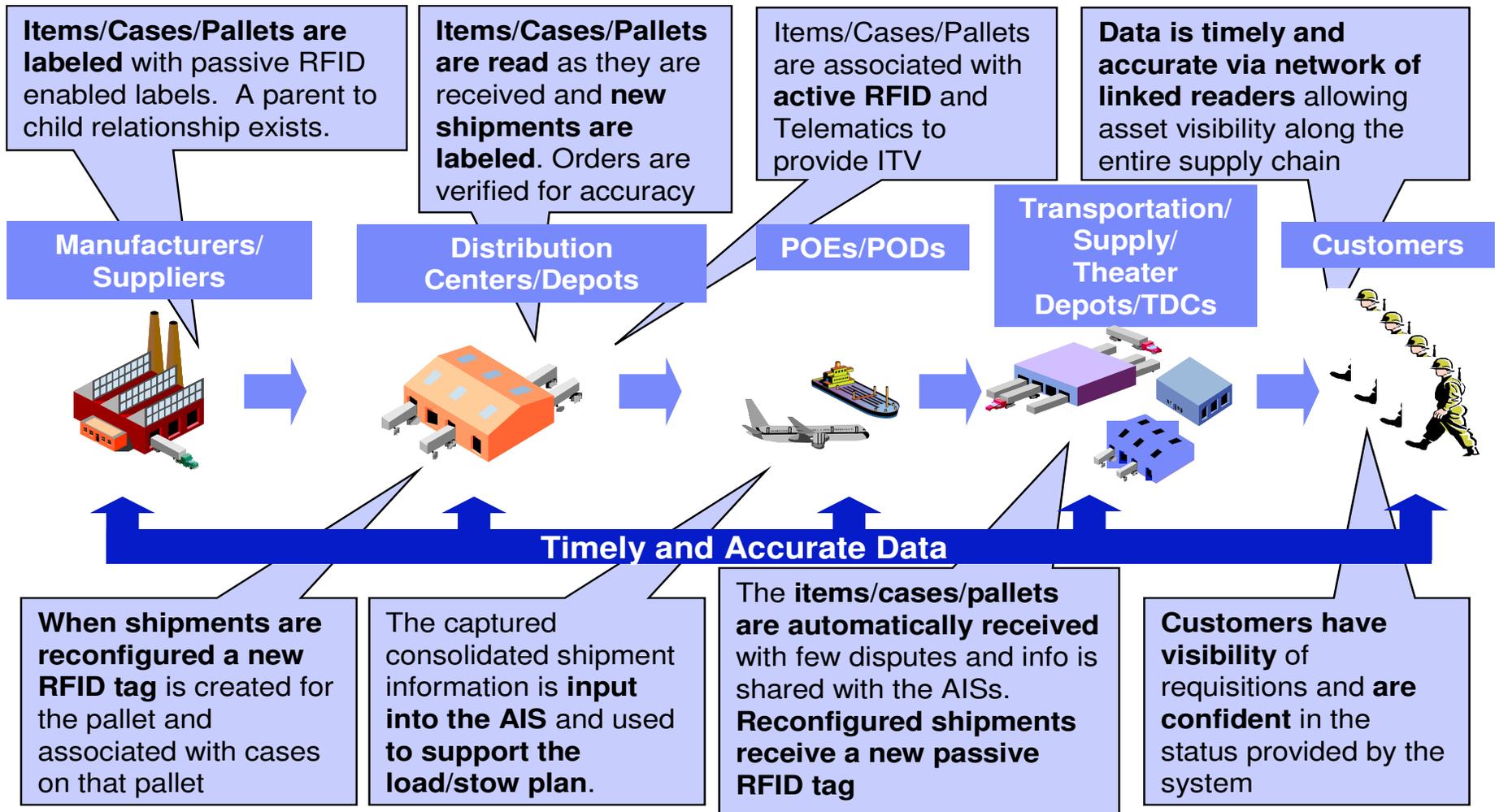


Small passive tags are used in clothing stores to assist in detecting shoplifters. Tag capacity is up to 20 Bytes of information. This tag differs from active tags by requiring external activation which generates sufficient power to transmit a return signal. This capability is far less expensive than the active tag but has a short read range and data capacity is small.

<http://www.acq.osd.mil/log/rfid/index.htm>



# DoD RFID Enabled Supply Chain





# UID, RFID, & DLMS Relationship

- The UID is a data set that identifies an instance of an item uniquely from all others even if it is identical to others in all other physical and functional aspects
- RFID is a technology that allows for hands free capture and uploading into a system of the occurrence of a business event at a particular place and time
- The DLMS X12 EDI and DLMS XML provide the capability to broadcast the occurrence of the event to other systems in the supply chain

**Bottom line: UID, RFID, and DLMS compliment each other in providing business event intelligence across the supply chain**



# DLMS UID/RFID Support Status

As of June 2005

## STATUS

## DLMS Transaction # And Name

Approved  
And Ready  
For Use

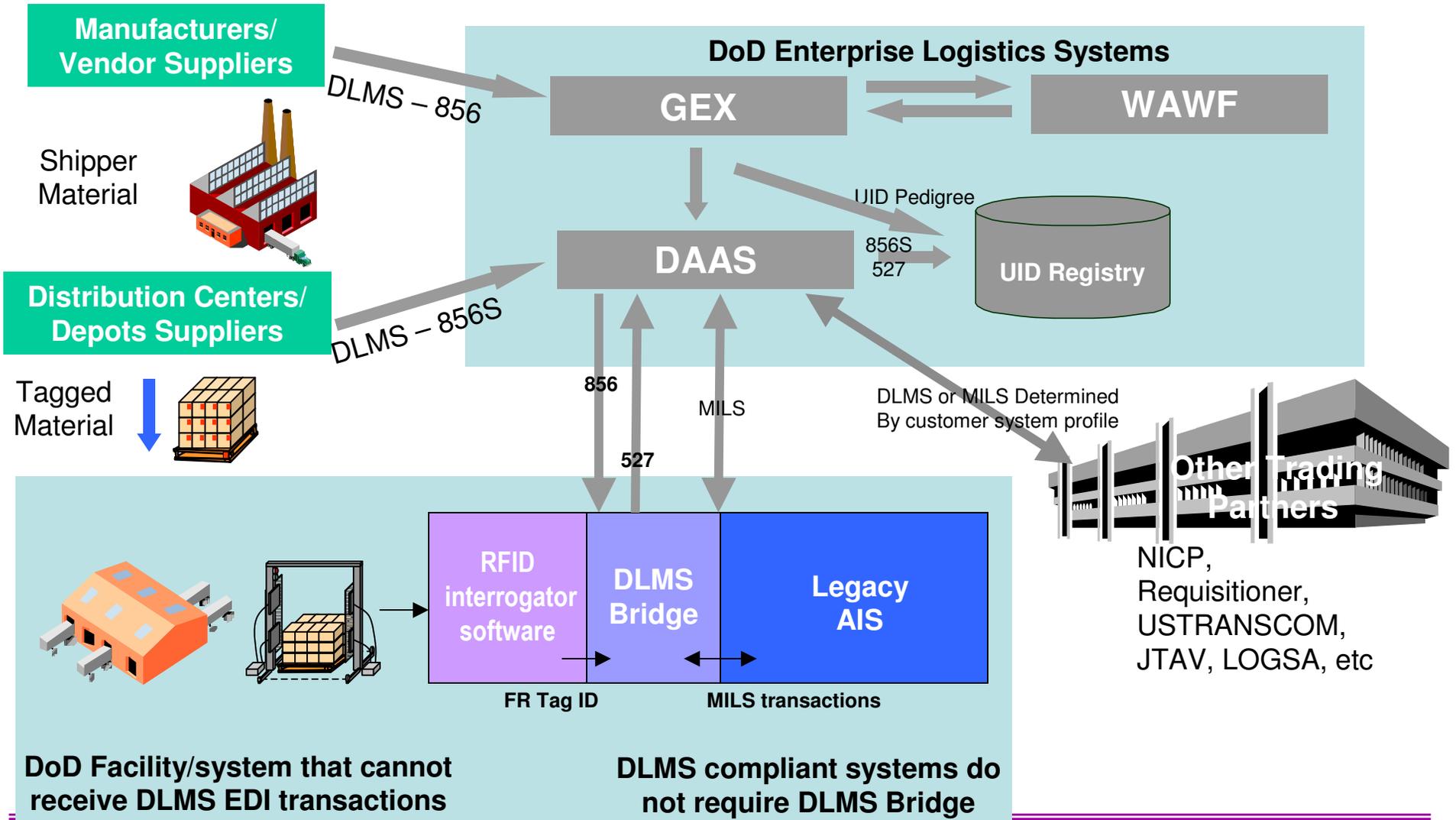
140A	Small Arms Reporting
180M	Material Returns Reporting
511M	Requisition Modification
511R	Requisition
527R	Receipt, Inquiry, Response & Material Receipt Acknowledgement
527D	Due-in, Advance Receipt, Due Verification
810L	Logistics Bill
842A/W	Supply Discrepancy Report Submission
842A/R	Supply Discrepancy Report Reply
842S/Q	Storage Quality Control Report
842S/R	Storage Quality Control Report Reply
846A	Asset Reclassification
846F	Ammunition Freeze/Unfreeze
846I	Asset Status Inquiry/Report
856	Advance Shipping Notice <i>(includes RFID data)</i>
856S	Shipment Status <i>(includes RFID data)</i>
861	Acceptance Report
867I	Issue
870M	Material Returns Supply Status
940R	Material Release
945A	Material Release Advice
947I	Inventory Adjustment

Under  
Development

888A	Small Arms Data Change
888B	Unique Item Data Change
140B	Unique Item Tracking Reporting



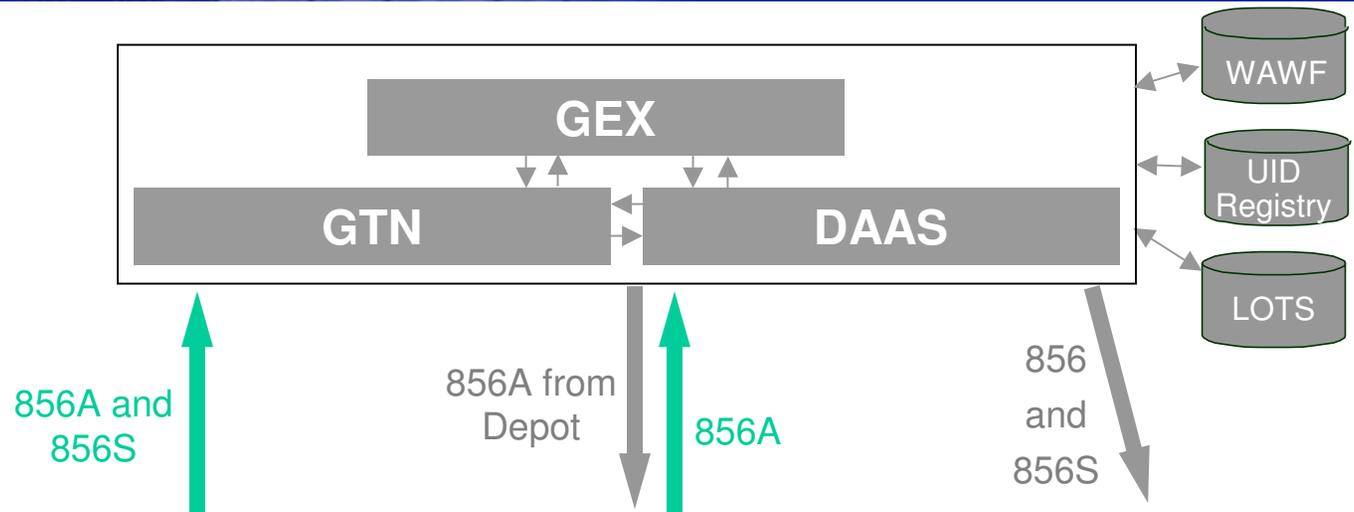
# Interim Solution Enabling the Supply Chain With Near Term RFID & UID Functionality



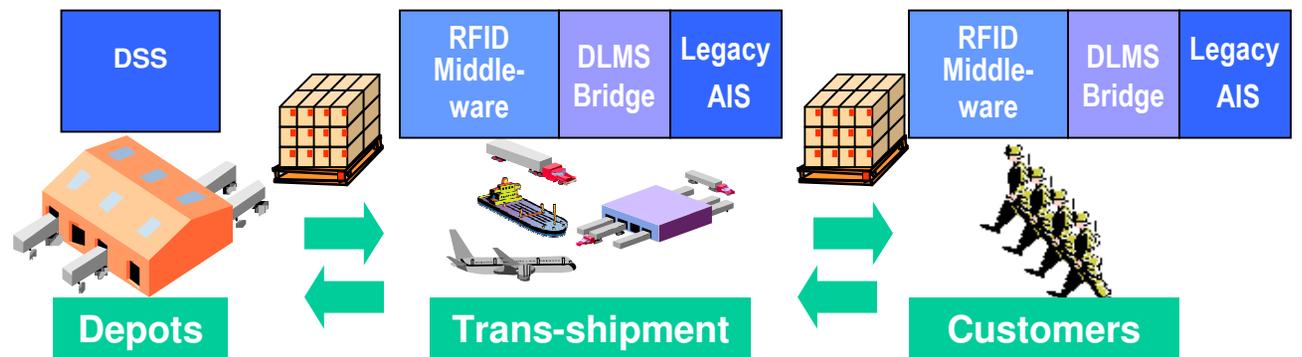


# Greatest Benefits Will Be Derived From Reengineering Business Process Rules at Enterprise and Local Level

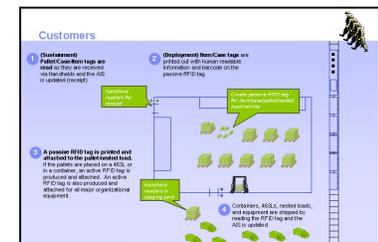
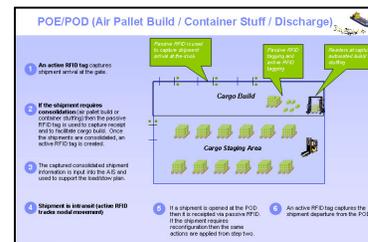
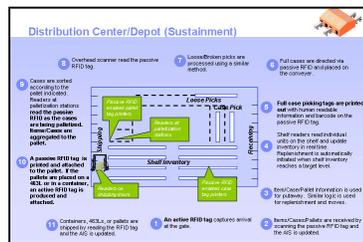
Data Flow



Material Flow



Internal Process And Enterprise Business Rules





# Summary

- **DLMSO is expanding its overarching logistics role to meet today's enterprise integration challenge and support the future logistics enterprise by:**
  - ❖ **Migrating DoD from proprietary EDI to flexible commercial standards**
  - ❖ **Actively supporting Component modernization efforts**
  - ❖ **Supporting DoD Transformation Initiatives (UID, RFID, Intragov, etc)**
  - ❖ **Exploring & implementing new technology solutions**
  - ❖ **Supporting the Enterprise Integrated Data Environment**
  - ❖ **Automating and Integrating SDR process**
  - ❖ **Reengineering the DoDAAD (Prototype for reference repositories)**
  - ❖ **Support the adoption of the best business practices**

**DLMSO – DoD Executive Agent For Logistics Data Interchange  
Business Process Transformation/Maintaining Interoperability**