"Supporting America's Defense"

… Quality Data DNA for the DOD's Global Supply Chain

Joseph D. Cassel, Jr., Colonel USMC
Commander
Defense Logistics Information Service

**International Conference
on Information Quality
November 5-7, 2004**

1

The DLA Enterprise

To provide best value logistics support to America's Armed Forces, in peace and war…
around the clock, around the world

FY 02 Sales/Services: $21.5B
FY 03 Sales/Services: $25B
FY 04 Sales/Services: $28B

- Land/Maritime/Missiles: $ 2.8B
- Aviation: $ 3.1B
- Troop Support: $12.4B
- Energy: $ 5.9B
- Distribution: $ 2.5B
- Other: $ 1.3B
- ~95% of Services' repair parts
- 100% of Services' subsistence, fuels, medical, clothing & textile, construction & barrier materiel

Foreign Military Sales

- Sales: $719M
- Shipments: 580K
- Supporting 124 Nations

Scope of Business

- 45,000 Requisitions/Day
- 8,200 Contracts/Day
- #56 Fortune 500 – Above Prudential Financial
- #2 in Top 50 Distribution Warehouses
- 25 Distribution Depots
- 5.2 Million Items
- 24.7M Annual Receipts and Issues
- 1411 Weapon Systems Supported
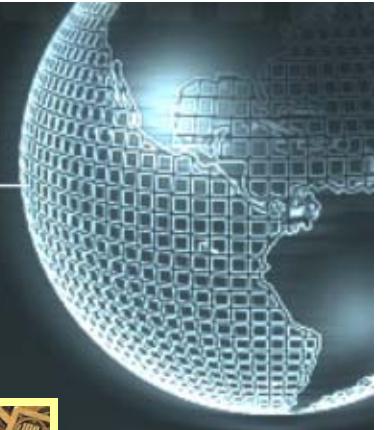- 144.0M Barrels Fuel Sold (FY 04)
- $14.6B Annual Reutilizations/Disposals

People

- 21,490 Civilians
- 524 Active Duty Military
- 637 Reserve Military
- Located in 48 States/28 Countries

2

Range and Reach of DLA

International

Army

Navy

Air Force

Marines

NATO Community

Contractors

Other Government Agencies

Enduring Freedom/ Iraqi Freedom

Noble Eagle

Joint Endeavor / Forge

Joint Guardian

East Timor

It Matters to the Warfighter

Reduced but More
Accessible Inventories

Better Quality

Faster, More Flexible and
Reliable Service

Giving the Warfighters
what they need

Lower Costs

Manager of Suppliers

Defense Logistics Information Service (DLIS)

FY04

- FED LOG Distribution: 445,765
- DOD EMALL Sales: $188.7M
- New NSN Assignments: 97,925
- All Transactions Processed: 40.7M
- Participated in 49 Provisioning Conferences
  - 79,806 line items reviewed

Resources

- 1,136 Civilians
- 5 Active Duty Military
- 307 Contractors
- FY05 Budget = $155M
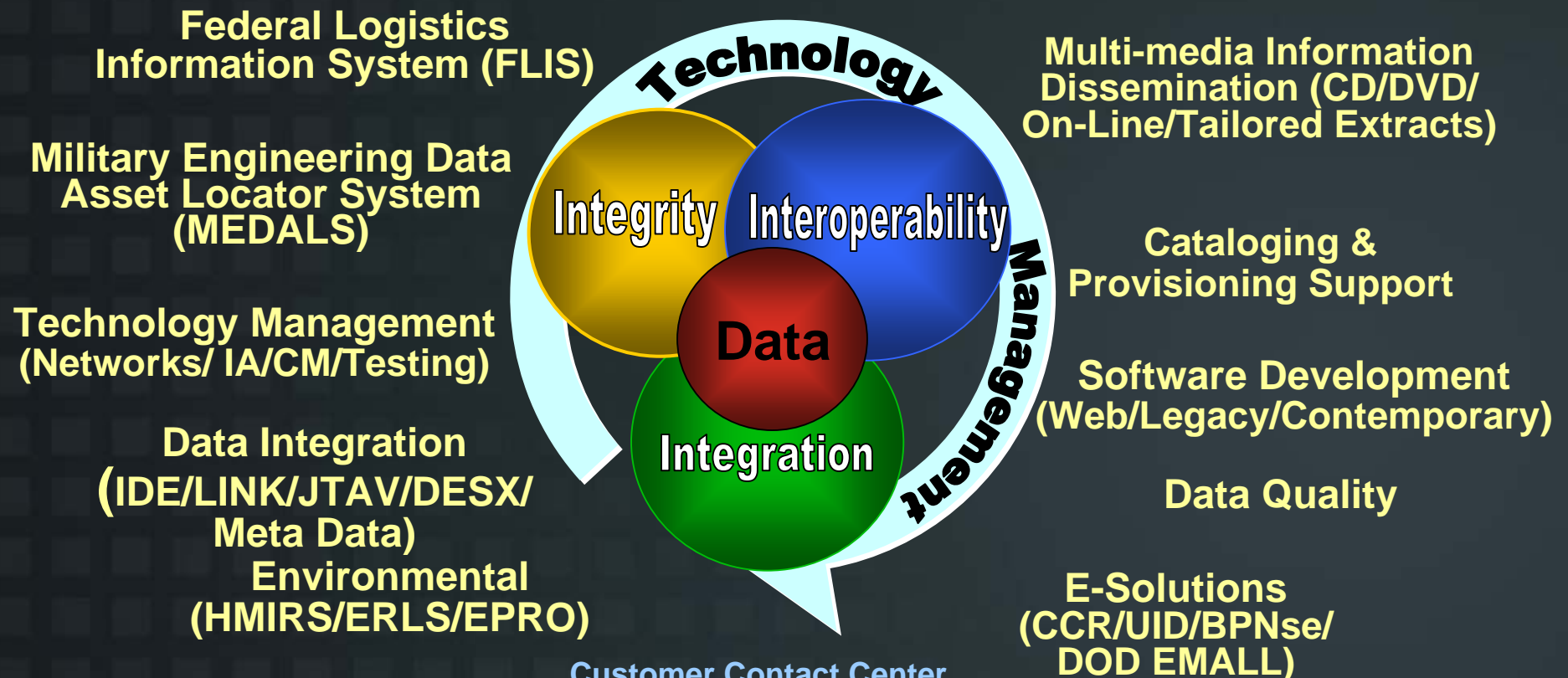- 373 Employees Teleworking

Scope of Business

- 634K users of DLIS information products
- 67K subscribers to on-line systems
- 6,887 tailored data extracts provided containing over 10.2B records
- 6.7M active NSNs in FLIS/16M NATO
- 37.2M technical data assets indexed in MEDALS
- 51 critical applications/118 total applications
- 26 NATO and 25 "NCS sponsored" nations
- 53 Foreign Military cases/30 countries
- Battle Creek Customer Contact Center:
  - 22,000 monthly calls
  - Abandoned call rate = 2.2%
  - Average speed to answer 20 seconds
  - 87% calls answered < 30 seconds
  - Answer 50% of daily DLA enterprise calls

Defense Logistics Information Service
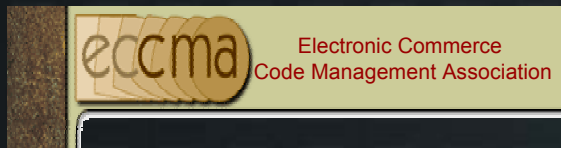## Mission

To provide interoperable, integrated, quality logistics data and enterprise IT solutions for joint warfighters, the Military Services, the Defense Department, other Federal agencies and international partners in order to optimize the effectiveness and efficiency of the DOD Supply Chain

Federal Logistics Information System (FLIS)

Military Engineering Data Asset Locator System (MEDALS)

Technology Management (Networks/ IA/CM/Testing)

Data Integration (IDE/LINK/JTAV/DESX/ Meta Data)

Environmental (HMIRS/ERLS/EPRO)

Technology

Integrity

Interoperability

Data

Integration

Management

Multi-media Information Dissemination (CD/DVD/ On-Line/Tailored Extracts)

Cataloging & Provisioning Support

Software Development (Web/Legacy/Contemporary)

Data Quality

E-Solutions (CCR/UID/BPNse/ DOD EMALL)

Customer Contact Center
DLIS-Support@dlis.dla.mil
1-877-352-2255

Integration . . . Using DOD Best Practice In Global e-Commerce

eccma
Electronic Commerce
Code Management Association

Members include

BAE SYSTEMS

SIEMENS

PEMEX

BECHTEL

GSA U.S. General Services Administration
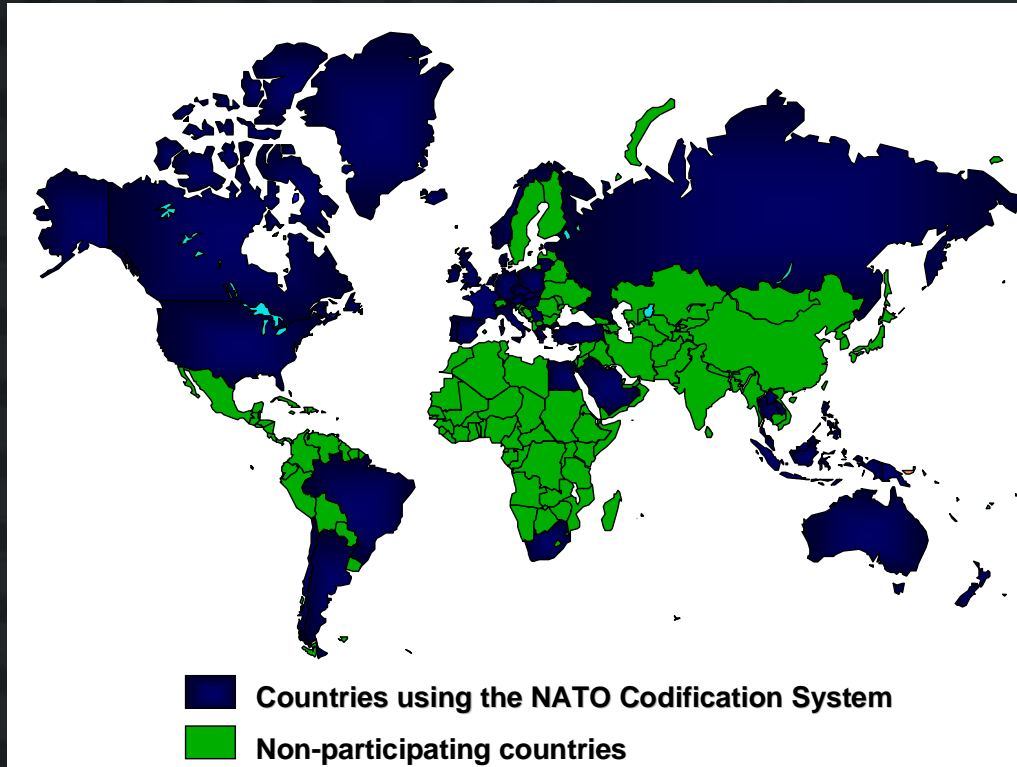
Lucent Technologies
Bell Labs Innovations

Raytheon

1. Codifies products, services & manufacturer processes
2. Standard taxonomy—naming and description conventions
3. Government and industry effort—supporting global economy . . . provides integration and interoperability
4. Maps to all classifications
5. Multilingual
6. Candidate for ISO Open Standard & PLIB

-<Attribute EGAI="**027382**" EGAI_Title="**ECCMA GLOBAL ITEM IDENTIFIER (EGII)**" Code_value="**006693**" Text_value="**BEARING:ROLLER;CYLINDRICAL**" />

-<Attribute EGAI="**021636**" EGAI_Title="**ECCMA GLOBAL CLASS IDENTIFIER (EGCI)**" Code_value="**002739**" Text_value="**Roller bearings**" Attribute EGAI="**027375**" EGAI_Title="**PRODUCT NUMBER**" Code_value="" Text_value="**14061685**" />

-<Attribute EGAI="**006983**" EGAI_Title="**OUTSIDE DIAMETER**" Code_value="" Text_value="**0.53 inches**" EUMI="**00798**" EUMS_Title="**INCH**" />

7

International Interoperability

Countries using the NATO Codification System

Non-participating countries

- 51 user nations
- 16M NSNs
- 30M Reference Numbers
- 1M Manufacturers
- 22M User Registrations
- Multilingual pubs/tools
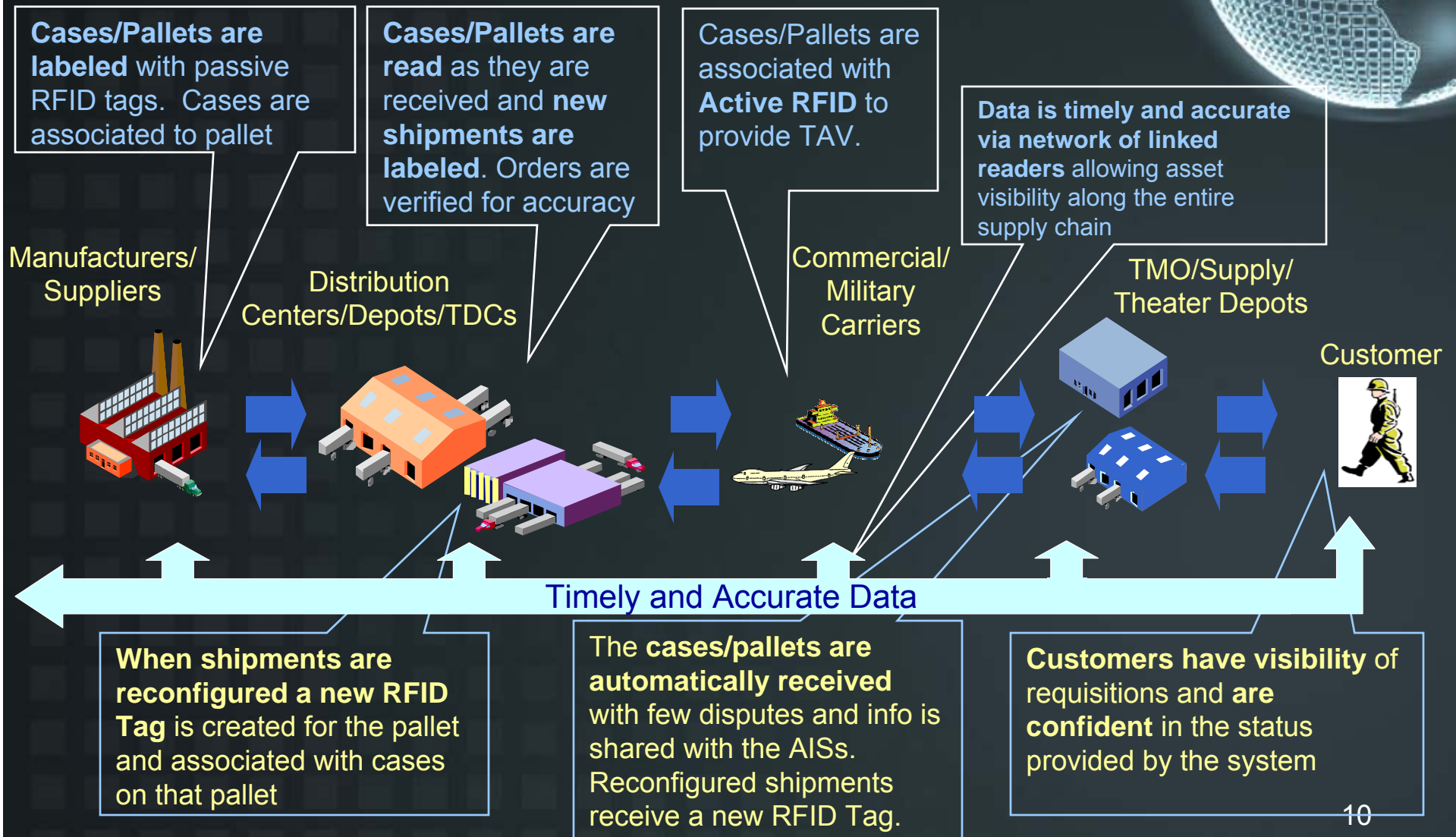
~Common Logistics Language~

Why we need RFID . . .

Visibility is Critical to Effective Logistics Support
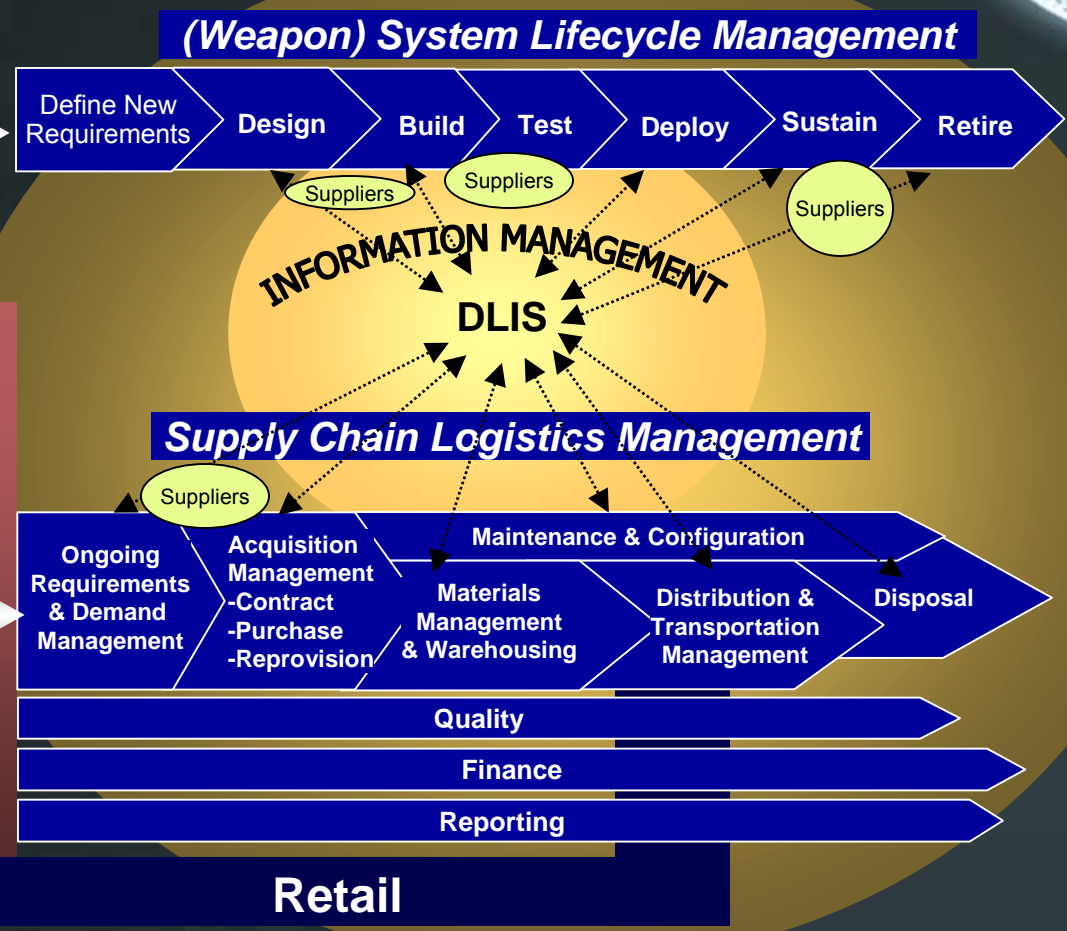
Enabling In-Transit Visibility (ITV) through RFID

Cases/Pallets are labeled with passive RFID tags. Cases are associated to pallet

Cases/Pallets are read as they are received and **new shipments are labeled**. Orders are verified for accuracy

Cases/Pallets are associated with **Active RFID** to provide TAV.

Data is timely and accurate via network of linked readers allowing asset visibility along the entire supply chain

Manufacturers/ Suppliers

Distribution Centers/Depots/TDCs

Commercial/ Military Carriers

TMO/Supply/ Theater Depots

Customer

Timely and Accurate Data

When shipments are reconfigured a new RFID Tag is created for the pallet and associated with cases on that pallet

The **cases/pallets are automatically received** with few disputes and info is shared with the AISs. Reconfigured shipments receive a new RFID Tag.

Customers have visibility of requisitions and **are confident** in the status provided by the system

10

DOD Supply Chain

"Data is the DNA of materiel management"
- Acquisition
- Financial management
- Hazardous material
- Freight & packaging
- Maintenance
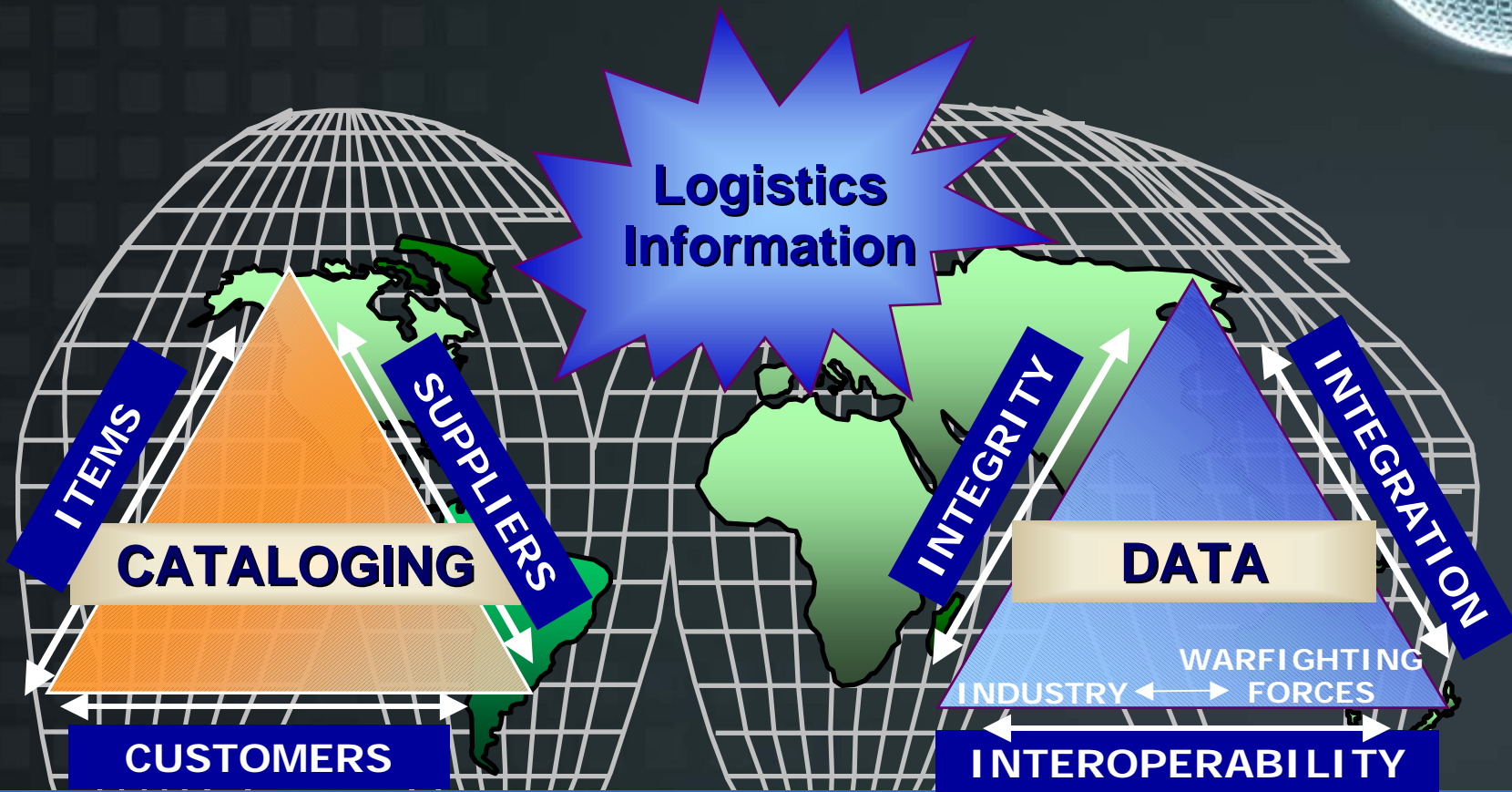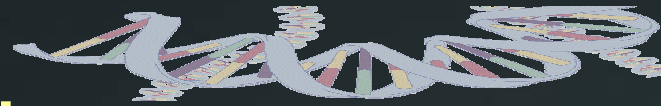- Sustainability
- Disposal
- Demilitarization

Who is the customer?
What is needed?
How many are needed?
Where is it needed?

- What meets the requirement?
- How many do we have and where? or, Where/ how can we obtain?
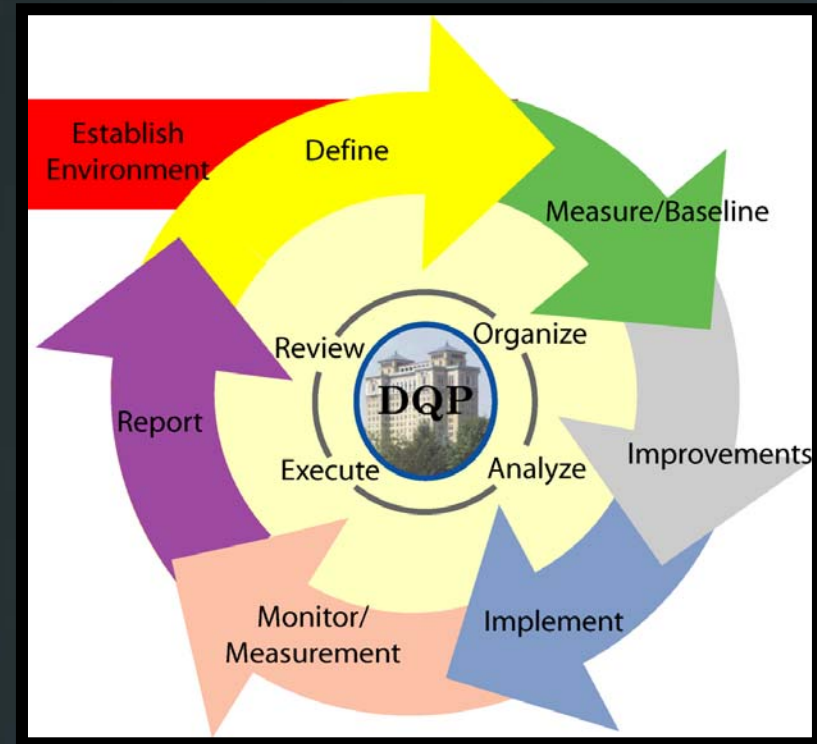- How must it be handled?

(Weapon) System Lifecycle Management

Define New Requirements | Design | Build | Test | Deploy | Sustain | Retire

Suppliers

Suppliers

Suppliers

INFORMATION MANAGEMENT

DLIS

Supply Chain Logistics Management

Suppliers

Ongoing Requirements & Demand Management

Acquisition Management
-Contract
-Purchase
-Reprovision

Maintenance & Configuration

Materials Management & Warehousing

Distribution & Transportation Management

Disposal

Quality

Finance

Reporting

Retail

11

. . . Data is the DNA

Data Is The DNA...

Logistics Information

CATALOGING
- ITEMS
- SUPPLIERS
- CUSTOMERS

DATA
- INTEGRITY
- INTEGRATION
- INDUSTRY ↔ WARFIGHTING FORCES
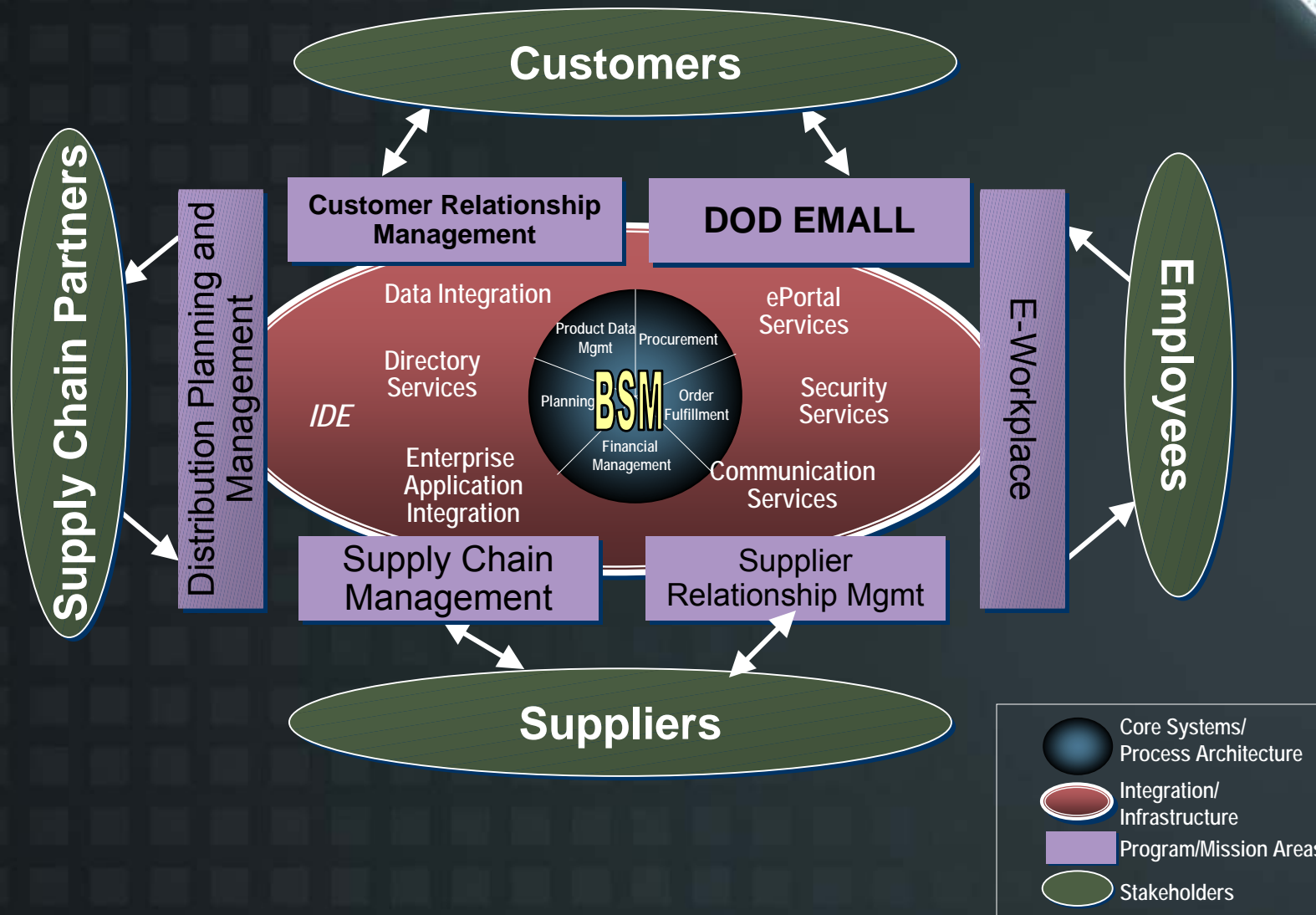- INTEROPERABILITY

Data Integrity Process

DLIS Data Quality Plan

- Organization
  - Management priority
  - Data stewards
  - Corporate visibility
- Process
- Technology

"You can't manage what you can't measure"

DLA's Transformation

Customers

Supply Chain Partners

Distribution Planning and Management

Customer Relationship Management

DOD EMALL

Data Integration

Directory Services

IDE

Enterprise Application Integration

ePortal Services

Security Services

Communication Services

Product Data Mgmt | Procurement
Planning | **BSM** | Order Fulfillment
Financial Management

E-Workplace

Employees

Supply Chain Management

Supplier Relationship Mgmt

Suppliers

Legend:
- Core Systems/Process Architecture
- Integration/Infrastructure
- Program/Mission Areas
- Stakeholders

14

BSM Material Master

Tech Quality Data Cleansing Complexity

- 13 Business Rules / 3.6M supply item records
- Authoritative data elements: FLIS 25, BSM 23
- Complexity
    - Manual & automated reviews
    - Initiative reviews: 5 logistics disciplines
- 44 PAGE "GRAND MASTER PLAN" for Data Cleansing

Rollout Through Dec 05

Rollout Jan 06 – Sep 06
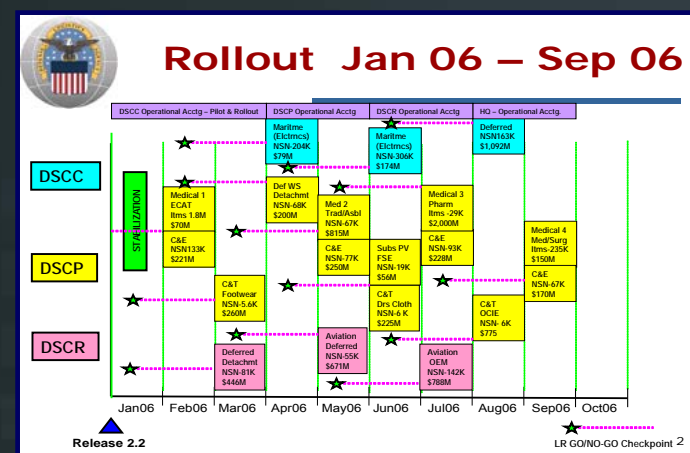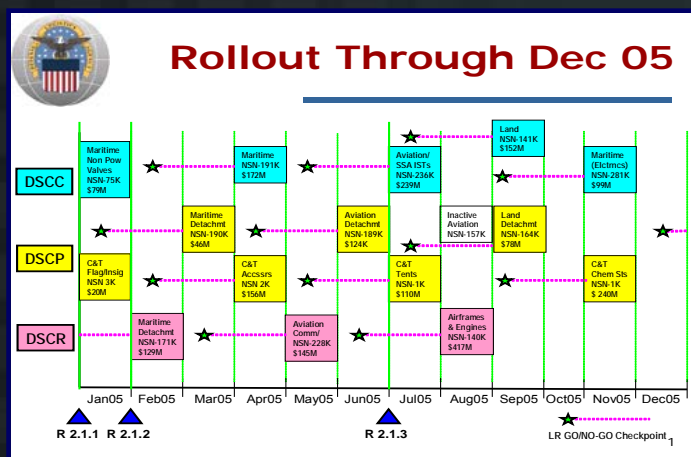
BSM Vendor Master

Data Input

500 BUSINESS RULES
500 EDITS

On-line
D&B Parent
Linkage

On-line
DUNS
Validation

3rd Party Data
Validation/Certification

SBA

CAGE

USPS

Federal
Reserve

CCR
Central Contractor Registration

DFAS
NOC

Data Output

Public Web
Search

DFAS

XML Transactions

Daily
Extracts

CCR Tools

BSM
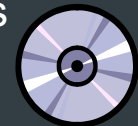
CD-ROM

**Business Systems
Modernization**

NO ANNUAL UPDATE = INACTIVE

16

Architecting Data Quality…...
Authoritative Data Sources

ARMY LMP

BSM

NAVY

- Vendor master
- Material master
- Customer master
- More…

Performance Based Logistics

More Organic   **More Commercial**

Organic Support

ORGANIC ← | MIX | CONTRACTOR →

Contractor Support

Traditional Organic Support Environment	Public / Private Partnering Opportunities	Contractor Responsible For Majority of Support
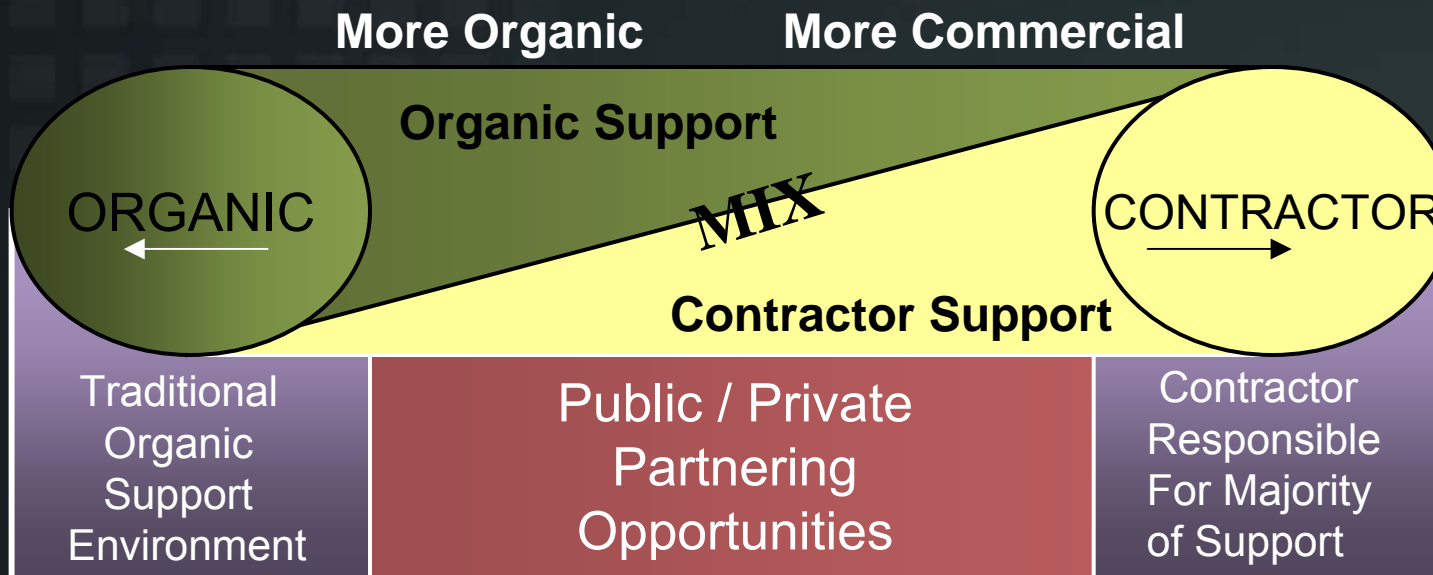
Examples:

- Total System Support Responsibility
- Industry Partnering
- Service Level Agreements
- Performance-based Agile Logistics Support

- Prime Vendor Support
- Contractor Delivery System
- Performance Plans
- MOU with Warfighter

*One Size Does **Not** Fit All*

Performance Based Logistics

- Contractor generated 19K National Stock Numbers meeting system edit requirements but did not reflect actual data

- Contained same:
    - Non-approved item name codes
    - Precious metals indicator codes
    - Unit of issues
    - Shelf-Life codes

- Cooperative clean-up initiative to reflect accurate data

Contractor Logistics Support

- Medium Tactical Vehicle Replacement

- Early-on involvement in the acquisition phase

    - Participate in:
        - Planning
        - Guidance
        - Provisioning Conferences
        - Lifecycle Working Groups

    - Obtain access to contractor technical data

    - Assign NSNs for all procurable items

Why Codes Matter . . .
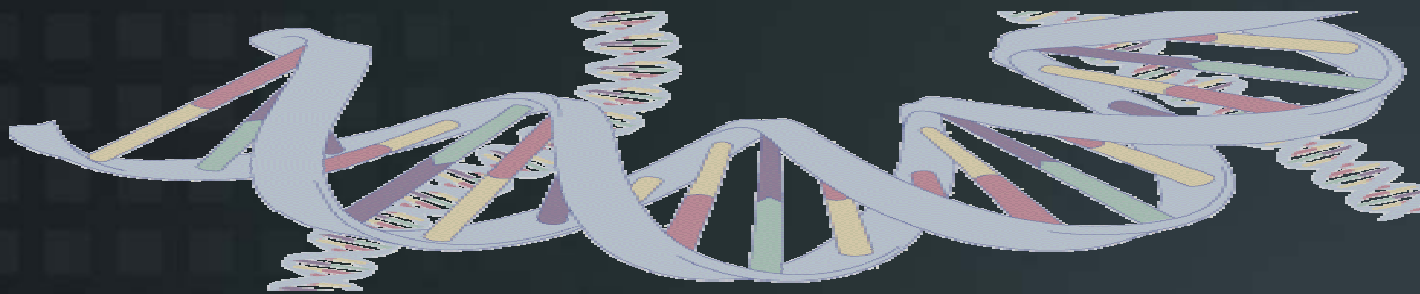## Demilitarization Code Review
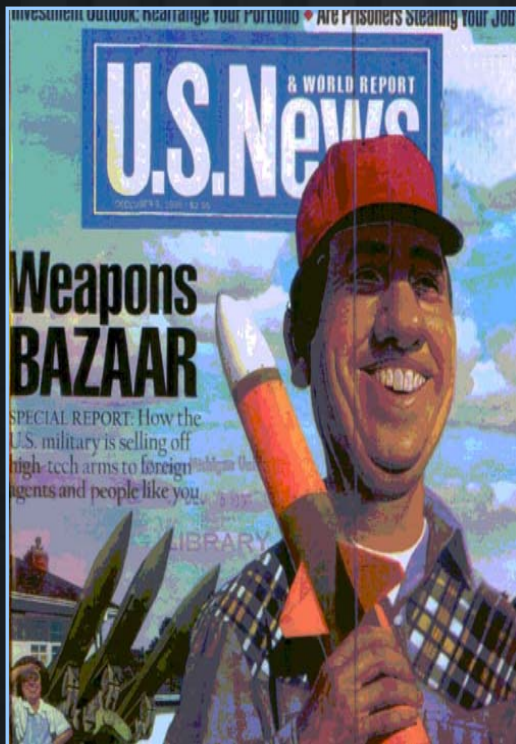
- One code – International implications
- Total population review = 14.7M
  - 2M reviewed and validated
  - 9% recommend code changes
- 100% New NSNs reviewed since 1999
  - 30% recommended code changes
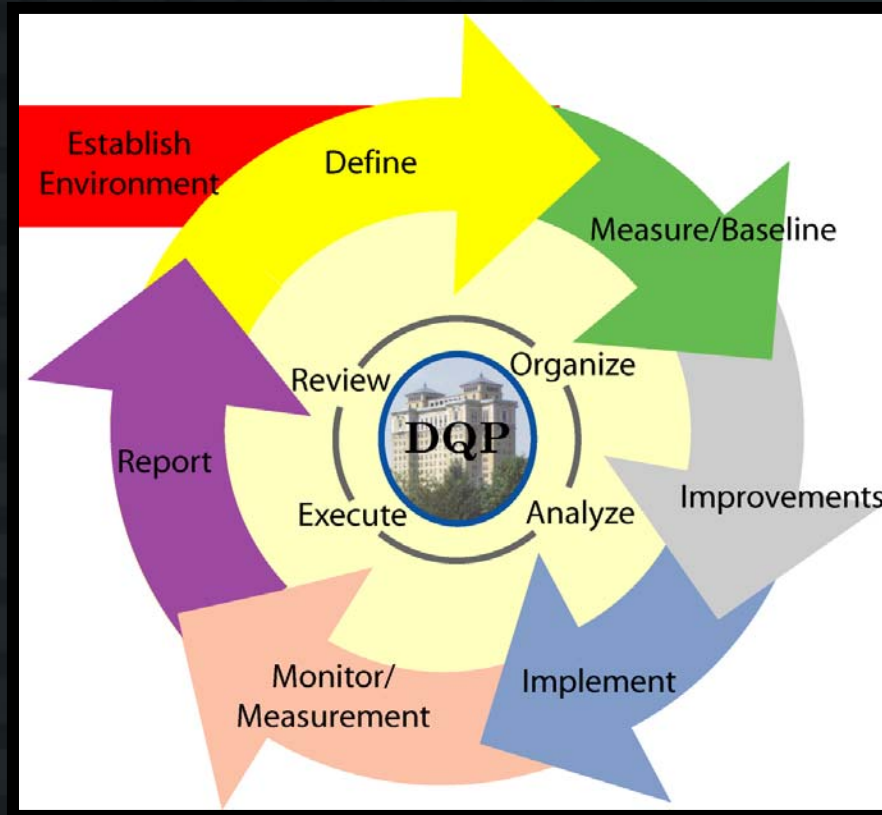- DOD Program Management Audit = 99.6% Accuracy

DOD Supply Chain
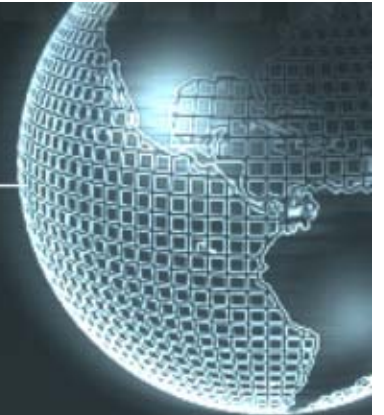
Identification → **Procurement** → **Distribution** → **Sustainment** → **Disposal**

Weapon Systems
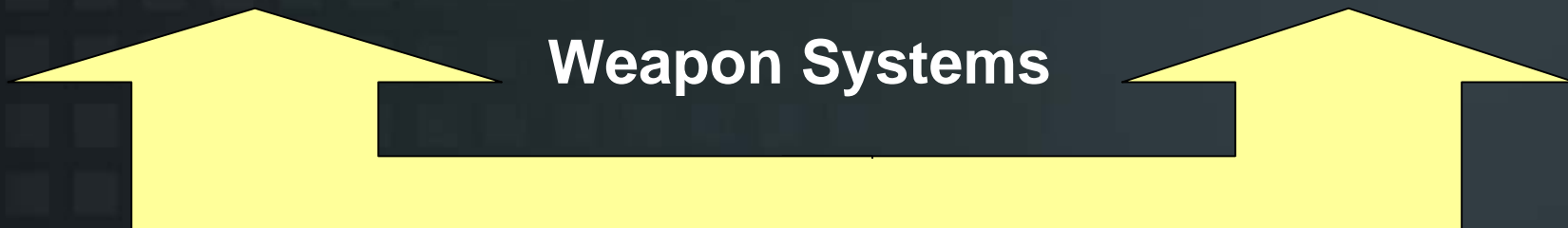
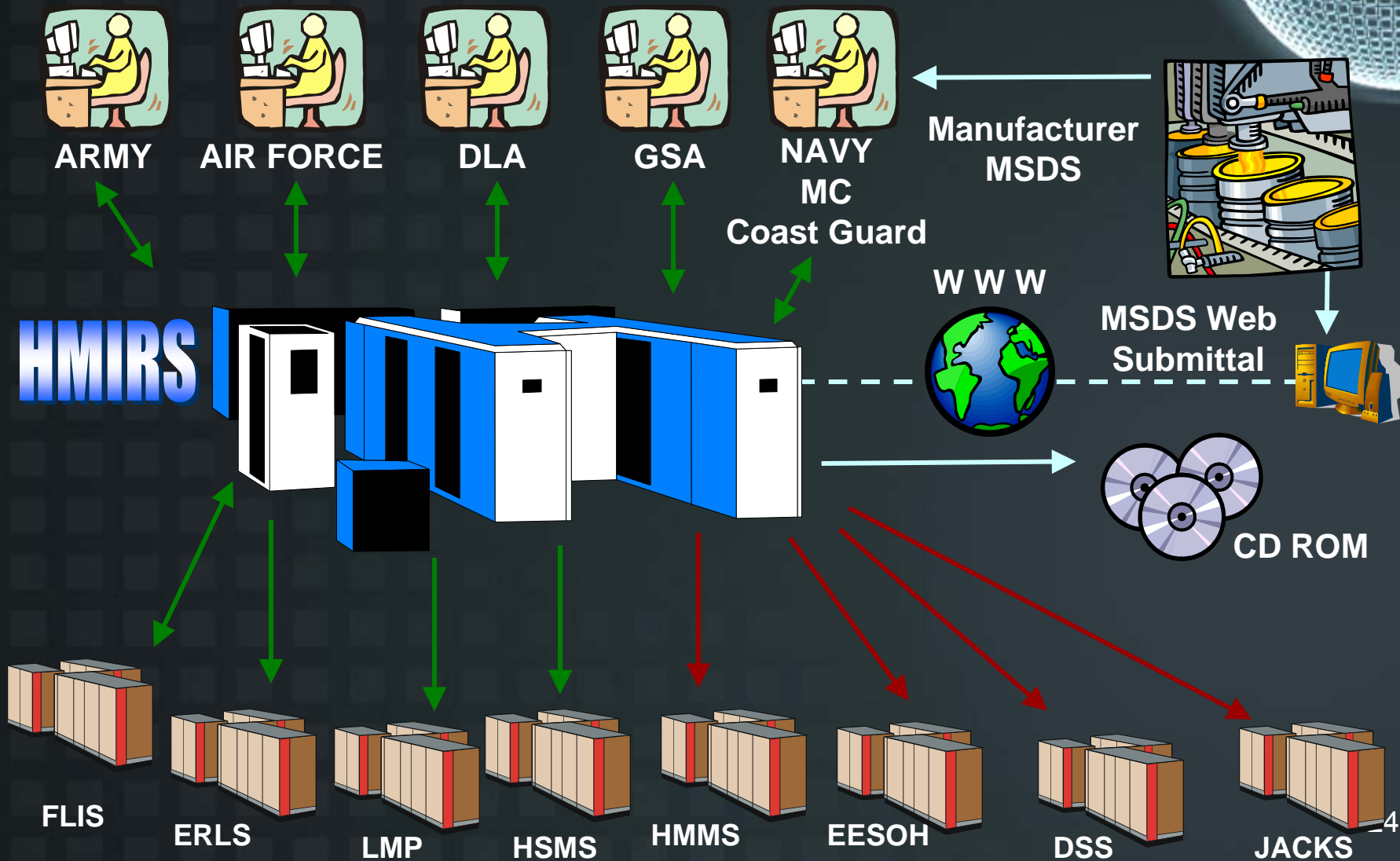## . . . Data is the DNA

Data Integrity Process

DLIS Data Quality Plan

- Organization
  - Management priority
  - Data stewards
  - Corporate visibility
- Process
- Technology

"You can't manage what you can't measure"

Hazardous Materials Information Resource System (HMIRS) Roadmap

HMIRS Status Update

Overall DLIS quality assessment of HMIRS
Process Step – Measure/Baseline
A – Accuracy C – Consistency C – Currency C- Completeness

DQ ISSUES	A	C	C	C	Over all	DQ ISSUES	A	C	C	C	Over all
1. Missing HCC	%	%	%	%	%	6. Invalid CAGE	53%	53%	53%	N/A	53%
2. Missing NIINs	93.5%	N/A	N/A	93.5%	93.5%	7. Non-matching P/Ns	X	X	X	X	X
3. Invalid NIINs in HMIRS	99.8%	N/A	N/A	N/A	99.8%	8. Zero-filled NIINs/LIINs	99%	99%	N/A	N/A	99%
4. Invalid LIINs in HMIRS	%	%	%	%	%	9. Duplicate company	82%	100%	100%	100%	92.8%
5. Missing HMIC in FLIS	83%	N/A	N/A	83%	83%	10. Invalid FSC	%	%	%	%	%

Grading Scale

90-100% A Green
80-89% B Yellow
70-79% C Orange
60-69% D Pink
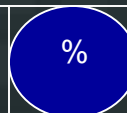59%-0% E Red
Not Established - White

Issues/Concerns:

Update processes
Increased Training
Authorities needed

Baseline Grade %

DCB Recommendations:

Brief the data owners
Create Process Flow Guides
Develop Customer Survey

25
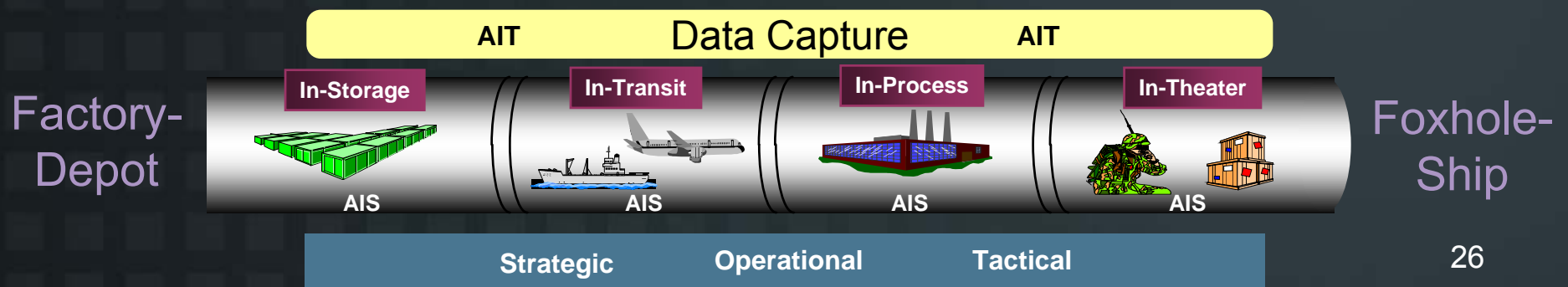
PM/DS:
Participants: Date Briefed:

Joint Total Asset Visibility

JTAV provides users with timely and accurate information on the location, movement, status, identity of units, personnel, equipment and supplies

- **29 data sources**
  - **Authoritative source issue**
  - **Automated Manifest System**
- **Data Evaluation**
- **Class of Supply**
  - **Using Army based code to apply to all Federal Supply Classes (FSCs)**

Asset Pipeline

		Data Capture		
	AIT		AIT	

Factory-Depot

| In-Storage	In-Transit	In-Process	In-Theater
AIS	AIS	AIS	AIS

Foxhole-Ship

Strategic	Operational	Tactical

Enterprise Integrated Data Environment (EIDE)

Provide an enhanced environment that enables the DOD Logistics Enterprise to execute practices, processes, applications and decision support tools to achieve logistics interoperability and allow for information exchange within and between internal and external DOD business partners.

- Non-system dependent transactions
- Consolidation and reuse of Interfaces
- Data integration/sharing
- Leverage Modernization Efforts
- Data Standards not Standard Data
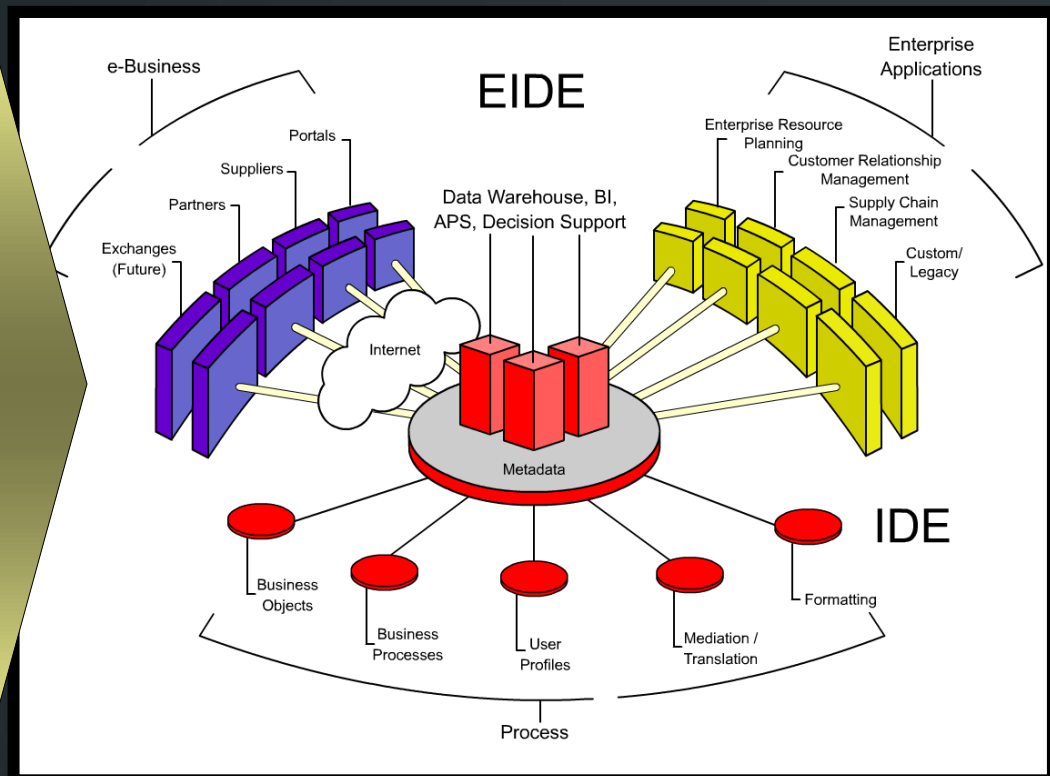
Challenges and Prospects

- Authoritative sources
- Empowerment to change data
- Metrics and scorecards
- Data Architecture
- Return on investment
- *Courage*

Logistics Data Excellence

Once data is shared it becomes an enterprise asset. It does not solely belong to the owners of the data or the authoritative sources. It also belongs to the users of the data. This includes the crew chief on the flight line, the supply point that orders the item, and the procurement and financial personnel.

DQ Gold

Questions?