

IUID – The Data Key for Enabling SIM

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Office of the Secretary of Defense
Defense Procurement and Acquisition Policy
OUSD(AT&L)/DPAP/PDI

Asset Identification Hierarchy

Item of Supply

NATO Stock Number (NSN) level

NSN

Item of Production

Part Number level

Vendor A
Vendor S/N
Vendor P/N

Vendor B
Vendor S/N
Vendor P/N

Item of Usage

Global Item
Unique
Identification
level (IUID)

UID A1	UID A2	UID B1	UID B2
UID A3	UID A4	UID B3	UID B4

IUID Basic Tenets

A compliant IUID Mark – Syntax & Semantics

- Using the syntax of ISO/IEC 15434, either of the three formats (TEIs, AIs, or DIs) can be used
- This interoperability of formats permits enterprises to use their prevailing machine-readable marking processes
- Resulting Unique Item Identifier (UII) is globally unique serial number

Formats:

ATA: Text Element Identifiers (TEIs)

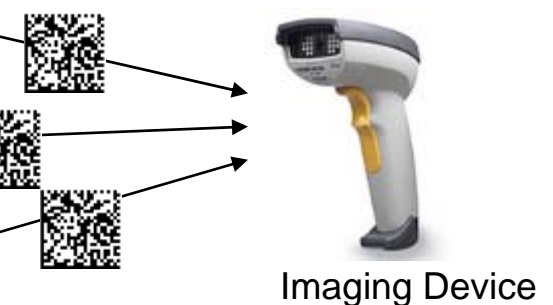
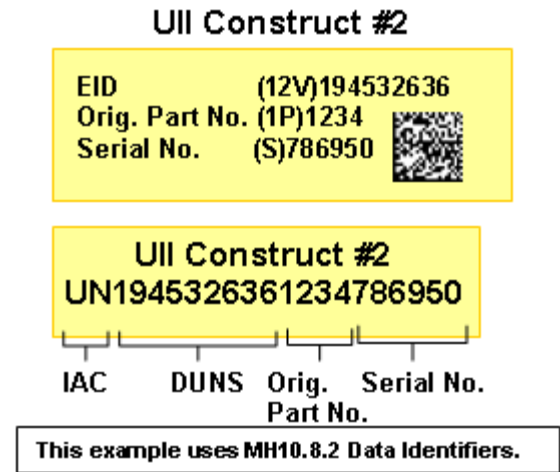
[] > ^R_S12^G_SMFR OCVA5^G_SSER 674A36458^R_S^E_O^T

GS1: Application Identifiers (AIs)

[] > ^R_S05^G_S800406141411A0B9C3D6^R_S^E_O^T

MH 10.8.2: Data Identifiers (DIs)

[] > ^R_S06^G_S17VOCVA5^G_S1P1234^G_SS786950^R_S^E_O^T



Data Plate Sample — Medium Tactical Vehicle Replacement (MTVR), USMC



Parent




Transmission



Engine

NOMENCLATURE: TRUCK, CARGO, XLWB, W/WINCH
USMC VEHICLE REGISTRATION NUMBER: 595327
NSN: 2320014652182
DESIGN ACTIVITY: 45152
SERIAL NUMBER: 10TDMWE3X3S078382
GOVERNMENT OWNERSHIP DESIGNATION: US PROPERTY
CONTRACT NUMBER: DAAE-07-99-C-M007
HUMAN READABLE UII: LDM67854MTVR-2XLWBMK28595327



Sample Direct Part Marks



**18 Times in Space
on OV-103 (Discovery)**

What data are captured in the US DoD IUID Registry?

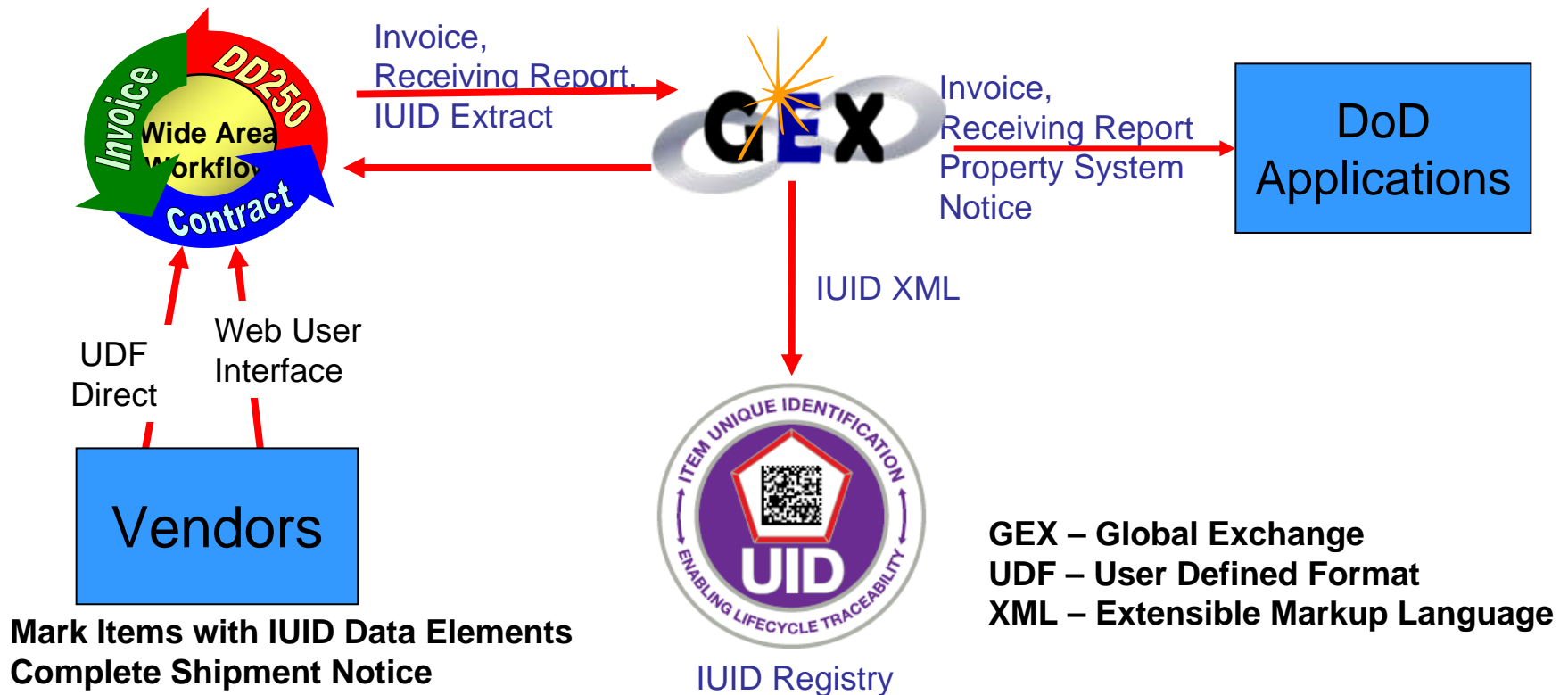
Data Elements

The table to the right identifies the data element fields within the IUID Registry.

Some data in the IUID Registry will not change; this is referred to as “static” data. Other data may be updated during the life cycle of the item; this is known as “dynamic” data. Examples of the static data include all the descriptive data elements except for Current Part Number and Current Part Number Effective Date. The Contract Info data elements are also static.

Descriptive data	Custody
Ull	Prime Contractor CAGE, DoDAAC or DUNS
Issuing Agency Code	Contract Number
Enterprise Identifier	Received Date
Original Part Number	Sent Date
Serial Number	Status Flag
Ull Type	Category Code (E or M)
Description	Mark
Batch/Lot	Contents
Current Part Number	Effective Date
Current Part Number Effective Date	AddedOrRemoved
Manufacturer Identifier	Marker Code
Parent Ull	Marker Identifier
Contract Info	Medium
Contract Number	Values in Mark Contents
Prime Contractor Identifier	Set
Acceptance Code	Status
Acceptance Date	Life Cycle Event
Acquisition Cost	Event Date
CLIN/SLIN/ELIN	Recording Entity
Foreign Currency Code	Source System and Document
Ship-to Code	Life Cycle Event
Unit of Measure	Life Cycle Event
	Life Cycle Event
	Life Cycle Event
	Location
	Recipient

US DoD - IUID Data Submission for New Items Via Wide Area Workflow (WAWF)



IUID Data Submission for Legacy Items



IUID XML
Or
UDF

IUID XML

DoD or
Vendors

Manual Web Entry



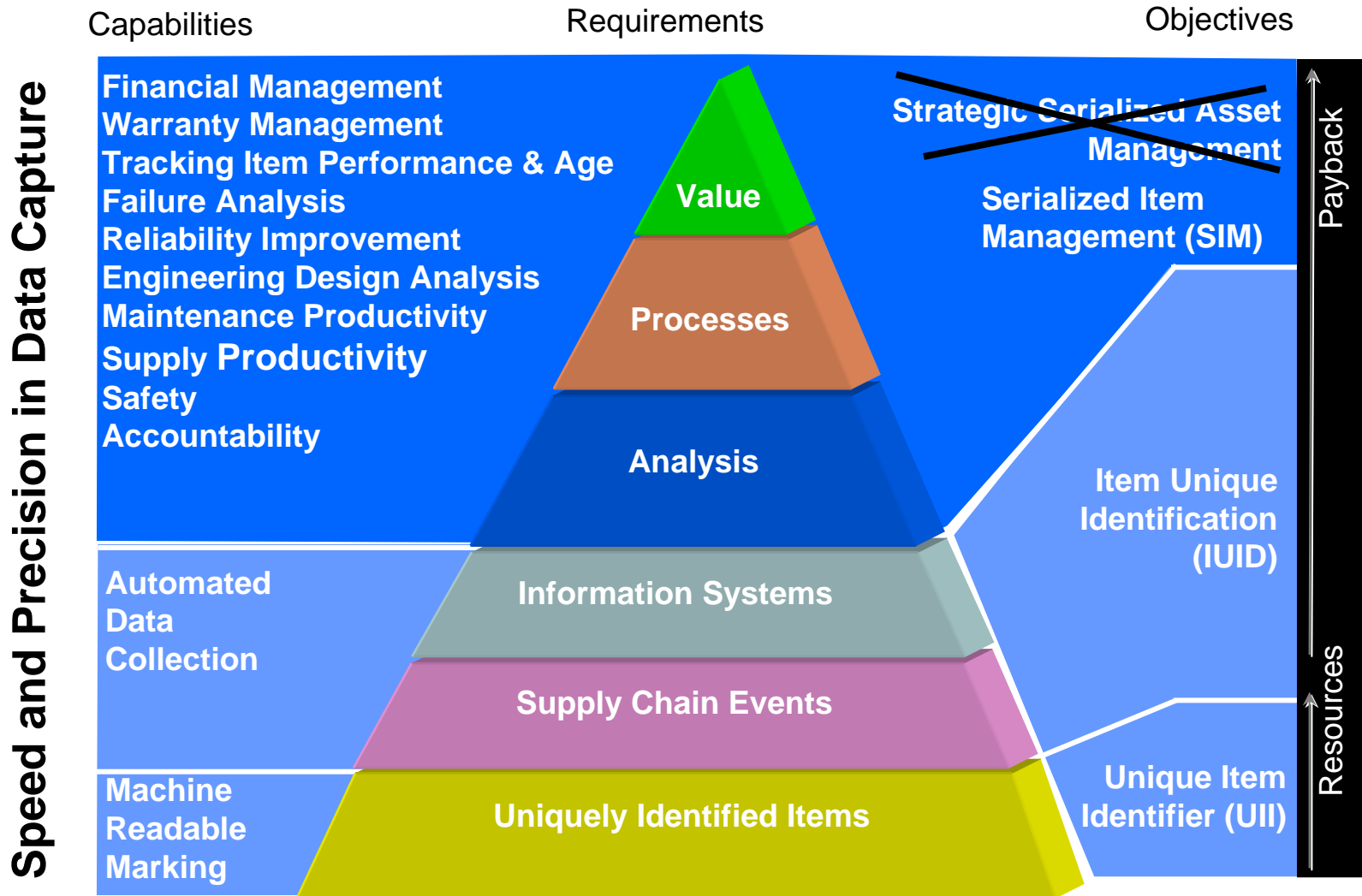
IUID Registry

- Legacy data submission has relaxed business rules for contract info
- INTERIM for Property Transfers pending full WAWF capability & deployment

Mark Items with IUID Data Elements
Shipment Notice

GEX – Global Exchange
EDI – Electronic Data Interchange
UDF – User Defined Format
XML – Extensible Markup Language

IUID Enabled Intensive Life Cycle Support Management



Recent Requirement –The Item Unique Identification Investment Review Board Condition

- **Any logistics, finance or acquisition system** that will spend \$1M or more in Development (RDT&E) funds in a fiscal year must go before one of the DoD Investment Review Boards (IRB) to be certified to spend the money
- These systems will receive the following condition:
 - *“The system must submit to the WSLM MSSM IRB, via its PCA, NLT 120 days from the date of the IRB, a compliance plan and date for when the system will include capability to use the IUID in all applicable unique item tracking, serial number tracking, and serialized item management (SIM) programs in accordance with DODI 8320.04 and DODI 4151.19.”*
- PM must provide a plan for how the individual system will comply.
- These plans must be coordinated with any component-wide UII plan that is in progress.

What is on the near horizon?

- Automatic data capture becomes the norm across the enterprise
 - Speed of data capture
 - Confidence in data quality yields confidence in decisions
- UII is “the” data key utilized by SIM
 - Information on the item is backup to master data sources
 - Information from master data sources used to inform intelligent agents and/or sailors, soldiers, or airmen
 - Reduction on “form” mindset (i.e. information supports the operation versus data to fill form)

Summary



- DoD IUID built on an existing International approach
- Data Matrix is a pervasive data carrier in other sectors
 - Pharmaceutical and Medical
 - Retail Foods
 - Financial Services
 - Automotive
 - Aerospace
 - Postal
 - Sporting Goods
- IUID is the global future (not just Defense) of item identification and serialized item management!
- International support for IUID is rapidly growing
 - NATO STANAG 2290 ratified by 15 nations
 - Netherlands Issued UID/AIT Policy recently
- The Defense Industrial Base is on the forefront of item level traceability for lifecycle management through UID and SIM

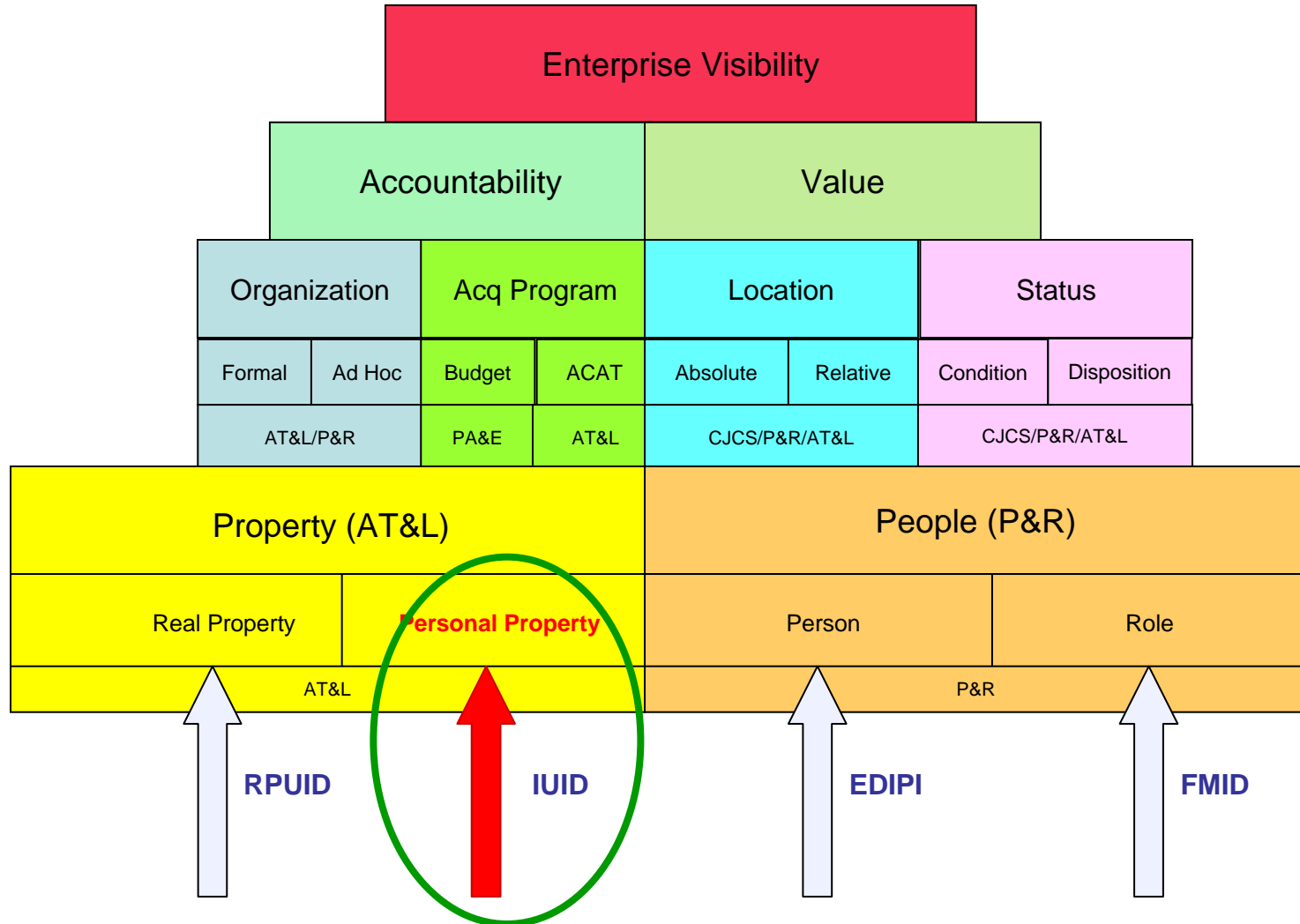


OUSD(AT&L) Sponsored Resources

- UID Website
 - <http://www.acq.osd.mil/dpap/pdi/uid> or www.uniqueid.org
- IUID Toolkit
 - <http://www.iuidtoolkit.com>
 - Four tracks: PMs, Suppliers, Depot, Warfighter
 - Two new videos – Technology Demo and Future Vision
- DAU
 - UID Special Interest Area: Within Acquisition Community Connection
https://acc.dau.mil/simplify/ev.php?ID=18058_201&ID2=DO_TOPIC
 - Continuous Learning Modules: <https://learn.dau.mil/html/clc/Clc1.jsp>
 - CLM200 - Item Unique Identification
 - CLC033 - Contract Format and Structure for the DoD e-Business Environment
 - CLL 013 - DoD Packaging
 - Coming soon – Marking for IUID
 - Rapid Deployment Training
 - AFMC Sponsored Course pilot (last week in Dayton)
- Outreach and Communication
 - Dozens of Presentations annually
 - Published Articles (AT&L Magazine, SOLE, DSPO, Army AT&L, etc.)
 - Program Office engagements
 - 13 IUID Forums/Bootcamps (7000 attendees), next events Apr and Sep 2009
 - IUID Quarterly E-Newsletters

Backup

US DoD Unique Identification (UID) Capstone View



International IUID Journey

Not just a US DoD Mandate



- ISO 15459 sets the Unique Item Identifier (UII) framework internationally
 - for transportation units, location and items
- US DoD requires
 - ISO 15459 to be followed to construct the UII
 - Marking an encoded ECC 200 2D Data Matrix
 - Delivery of IUID Pedigree data to the US DoD IUID Registry
- Air Transport Association Spec 2000 accepts ISO standard marking to expand IUID use to commercial aviation
- US DoD Recognizes IUID Equivalents (VIN, ESN, GIAI, GRAI-when serialized) that meet IUID marking requirements
- NATO
 - STANAG 2290 “UID of Items” Ratified by 15 nations and published Dec 2007
 - Life Cycle Management Policy in NATO
 - AC327 UID Working Group 5 Established Jan 25, 2008
 - Initial Draft of Allied Publication AUIDP-1 in review by WG5
- Non-US national policies and implementations are underway

The US DoD Requirements Foundation

- USD(AT&L) Policy Memoranda (select list)
 - July 03, All New DoD Acquisitions beginning Jan 1 2004 including FMS and purchases through other agencies
 - Dec 04, ACAT Program Implementation
 - May 05, Gov Furnished Property
 - Mar 08, Systems Engineering and Supportability Planning Must Address IUID
- DoD Directive 8320.03, Unique Identification for a Net-Centric Department of Defense Mar 23, 2007
- **DoD Instruction 8320.04, Item Unique Identification (IUID) Standards for Tangible Personal Property (JUN 2008)**
- **DFARS 252.211-7003, Item Identification and Valuation (JUN 2005)**
- DoDI 5000.64, Accountability and Management of DoD-Owned Equipment and Other Accountable Property, Nov 2, 2006
- Defense Acquisition Guidebook
 - Ongoing revision of: DODI 5000.2, Operation of the Defense Acquisition System, May 12, 2003
- DoD I 4151.19, Serialized Item Management
- **MIL STD 129P(4) Department Of Defense Standard Practice Military Marking For Shipment And Storage**
- **MIL STD 130N DoD Standard Practice: Identification Marking of U.S. Military Property**
- Standard Financial Information Structure (SFIS)
- The Concept of Operations for IUID-Enabled Maintenance in Support of DoD Materiel Readiness, Revision 1, January 2007

US DoD Success Stories

- ✓ More than 20 one-pagers on policy office website
 - www.acq.osd.mil/dpap/pdi/uid
- ✓ Over 1000 UID Program Implementation Plans Approved by DoD or Components
- ✓ Information capabilities for IUID data handling
 - ERPs
 - DLMS transactions
 - WAWF