

# **IUID/SIM Implementation within the DoD Maintenance Enterprise**

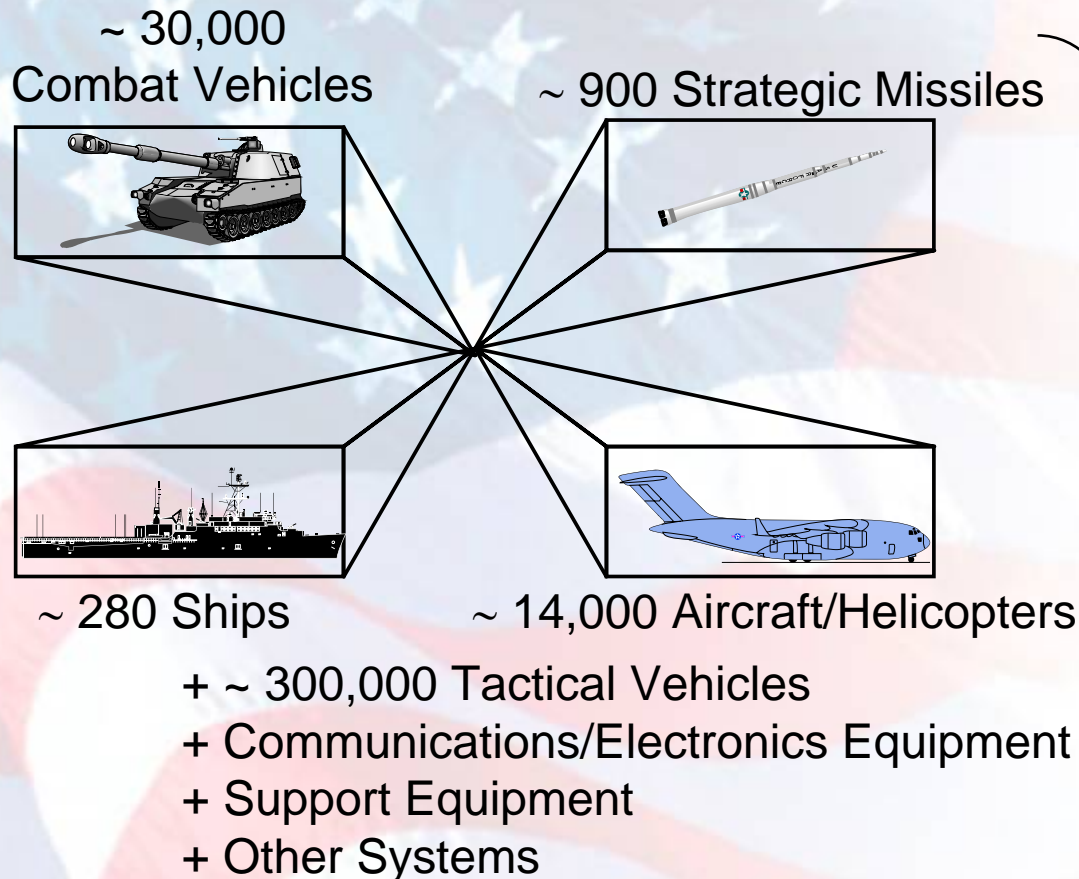
**“Sustaining Materiel Readiness”**



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**30 August 2006**

# DoD Maintenance Enterprise Systems Supported



National Defense Inventory is valued at ~ \$700B

*Maintained by:*

- 678,000 DoD personnel
- Private sector companies

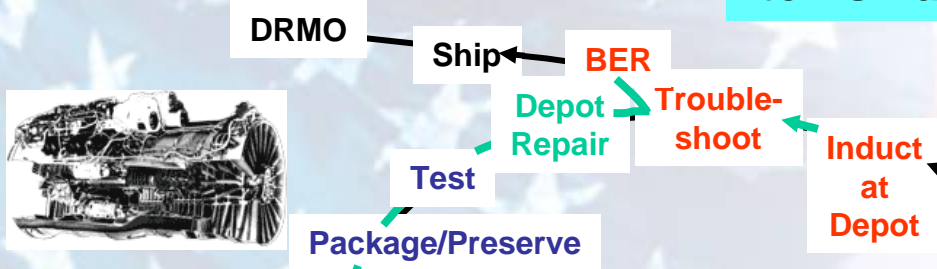
*Maintenance cost:*

~ \$81 billion per year

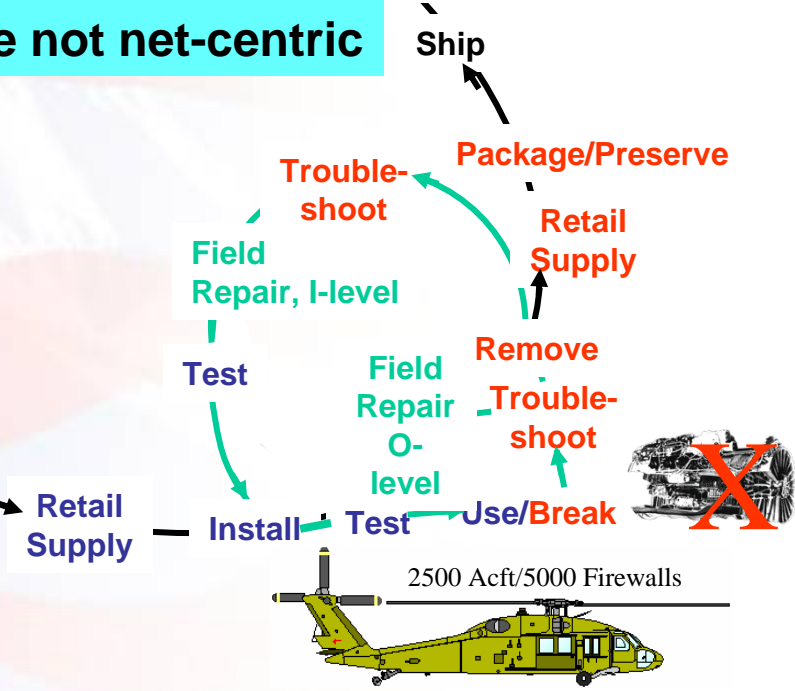
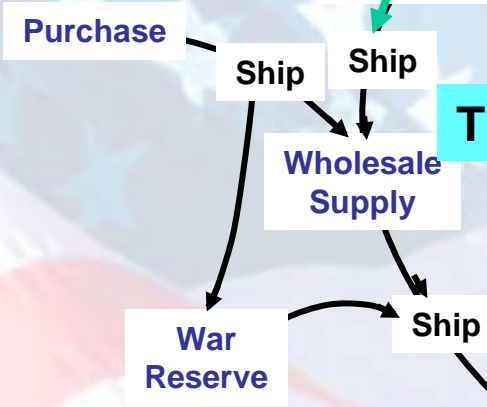
**> 100M Candidate Parts**

# Property Transfer Dynamics

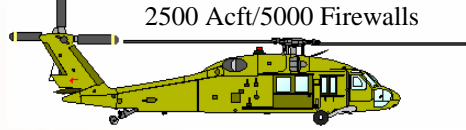
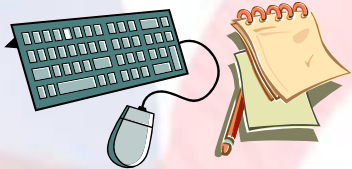
Items have to be identified at every step



Transactions are not net-centric



Item identification is manual



# Sustained Materiel Readiness

## Strategy

- **Concentrate on achieving/sustaining SPG/CPG readiness**
  - **Balance Safety, Reliability, Maintenance and Supply Distribution activities to achieve materiel readiness at best cost.**
  - **Optimize “TIME-ON-WING” and “TURN AROUND TIME”**
- **Promote End-to-End (E2E) Materiel Readiness Value Chain Perspective across DoD**
- **Sustain Optimal Materiel Condition & Reliability**
- **Sustain Optimal Support Cost & Cycle Time**

$$I + T = M$$

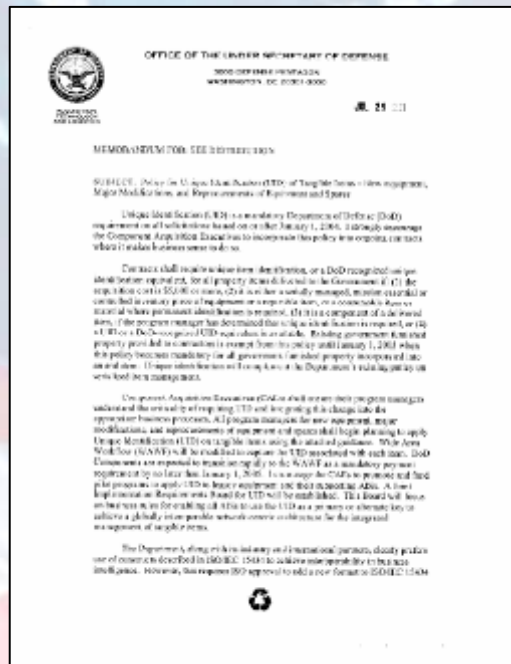
# A DoD Strategic Imperative

IUID is strategically critical to enable property management processes throughout the DoD enterprise to engage with precision and speed to:

- Always know what property the DoD owns
- Always be able to account for it
  - Know where it is
  - Know who has custody of it
  - Know who is accountable for it
  - Know how it has been maintained
  - Know what it cost
  - Know it's value
- And use this information to:
  - Enable capability-based readiness
  - Support planning, forecasting, and budgeting
  - Identify gaps in capabilities
  - Improve reliability and warranty management
  - Improve processes
  - Reduce cycle time

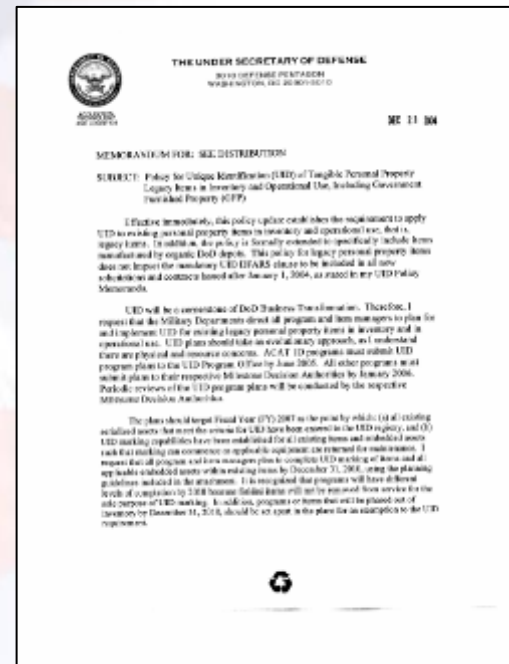
# Policy Approach created two IUID “PPE Populations”: *New Tangible Items & Legacy Items*

USD(AT&L) Policy Memo  
29 July, 2003



- **New tangible items**
  - Begin NLT 1 Jan 2004
    - commercial purchases
  - Begin NLT 1 Jan 2005
    - depot manufactured items

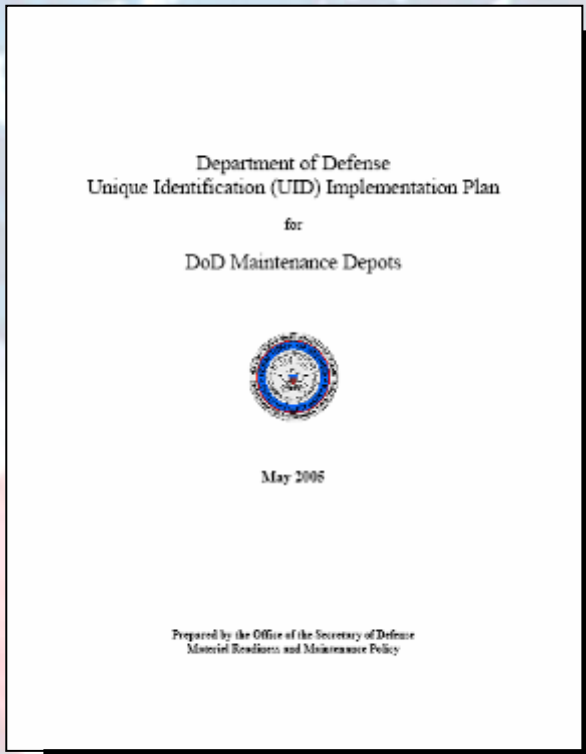
USD(AT&L) Policy Memo  
23 December, 2004



- **Legacy items in inventory**
  - IOC Jul 2005
    - pilot depots
  - Complete NLT Sep 2007
    - all existing serialized items
  - Complete all items NLT Dec 2010

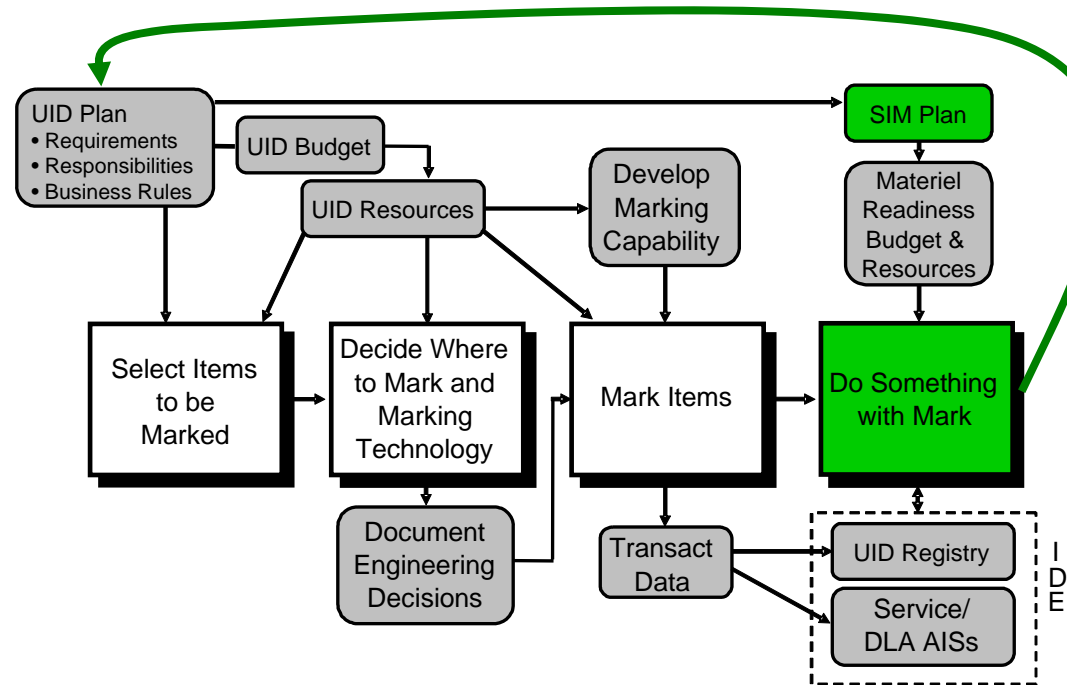


# Legacy IUID Implementation Plan for Maintenance Depots



Issued May, 2005

Use of IUID is undefined for maintenance processes  
*"we're learning how to mark our parts, but no one here knows what this is going to do for us"*



# The Art of The Possible

- 4 key scenarios pertaining to the maintenance & sustainment processes of a single weapon system-generic component within a fully IUID-enabled environment:

*1. Field Level Operations*

*2. Sustainment Operations*

*3. Lifecycle Management*

*4. PBA, CLS, & FMS*



1

Mechanic Conducts Post-Mission Inspection of Weapon System



2

Mechanic Scans Weapon System UID Using Portable UID Scanner

3

Data Communicated to the MMP; MMP Provides Tech-Data; Fault Detected and Associated to Item via UID

4

Requisition for New Servo Transmitted Wirelessly to Production Control (PC)



5

All Information Regarding Servo Fault, Removal, and Preparation Actions Passed to Quality Control (QC) and PC Office



6

Mechanic Scans New Servo UID



7

Mechanic Installs New Servo, MMP Receives Engineering Alert Via QC Office



8

Mechanic Applies Appropriate Actions, Annotated in the MMP, Weapon System Returned to Full Service





2

DIS Cross-Checks IUID with Service's Information Network, which Reports Servo In Transit via Commercial Carrier



1

Depot Production Manager Reveals Unserviceable-Repairable Servo Being Retrograded to Depot via Maintenance Databases, Using DIS

Shipment Arrives at Depot, Labels Scanned, Transmitted to DIS



3



4

Item Placed into Immediate Teardown, Actual Faults Recorded into DIS. DIS Provides Further Disposition Instructions, Sends Notices of Condemnation to DRMO System/Weapon System Managers

5

The Servo is Tagged and Sent as a Condemned Item to the DRMO where it will be Demilitarized and Sold as Scrap for Recycling



2

Using IUID-Enabled Relational Data, IM Determines Servo Demand Rate is Five Times More than Expected. Decision for an Emergency Acquisition of Additional Servos Required. Upon Query, System Manager Finds Majority Condemned Due to Higher Tolerances of Inside Housing Diameter



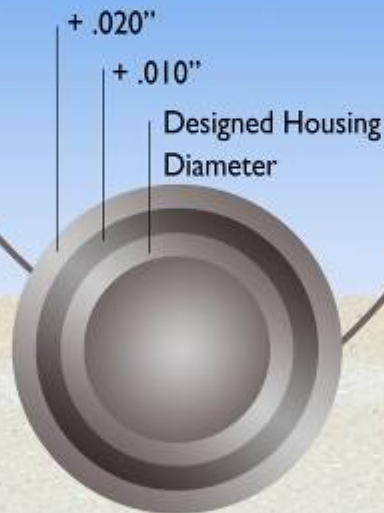
4

Weapon Systems Engineers Concur, Manager Advises IM to Halt Emergency Processes. New Seals Ordered, DMWR Data Revised, Depot Initiates Retrieval of 2 Servo Housings Recently Shipped for Demil'.



1

Item Manager of Condemned Servo Notified via DIS and Service Networks, Servo Subsequently Scrapped, Inventory Reduced by 1



3

Engineering Review Finds the DMWR Diameter Tolerances Established for Replacement of Seals. Most Condemnation Instances would be Eliminated by Allowing Larger Seal, Over 0.10", Not Exceeding .020"

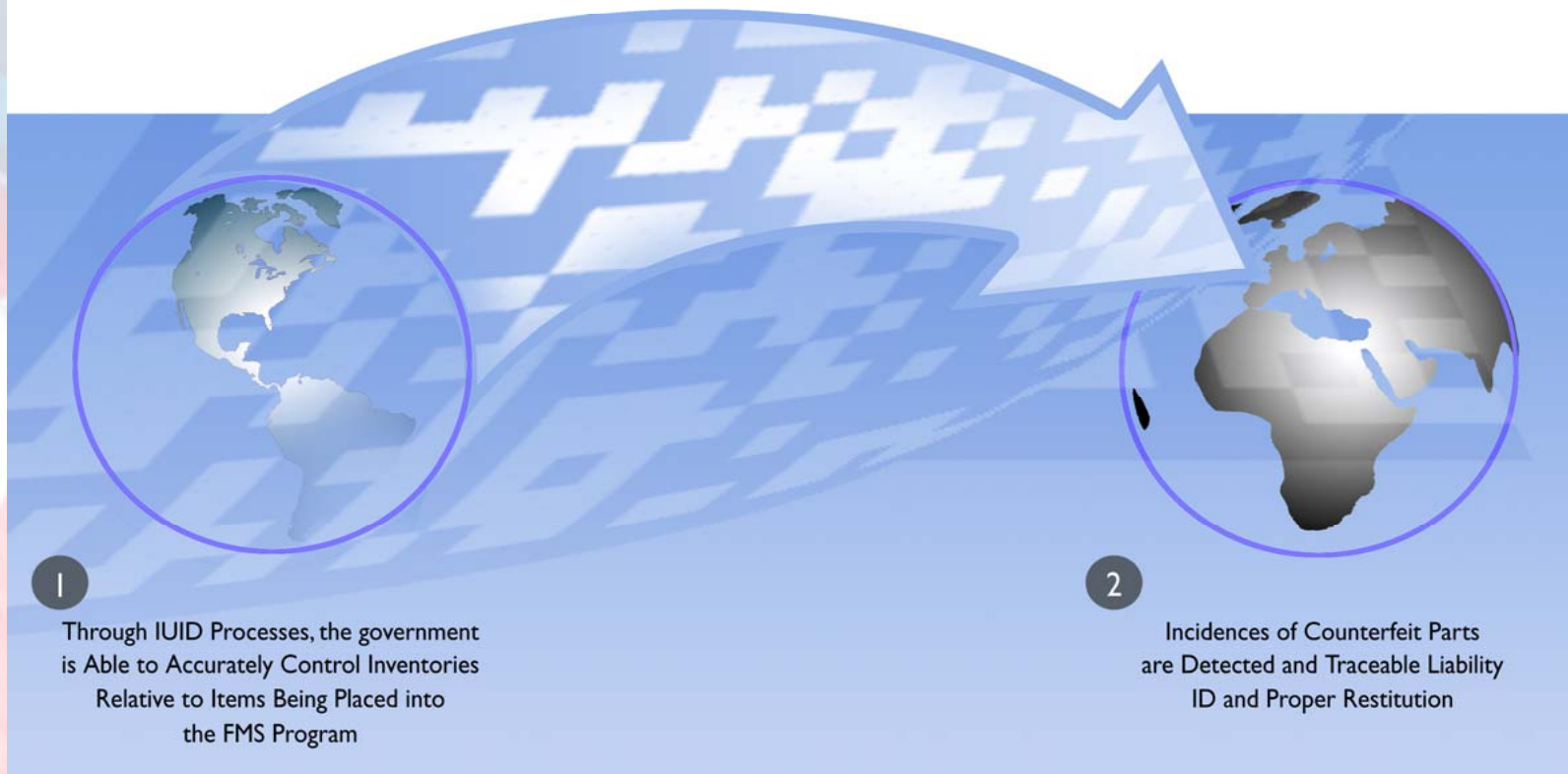


5

Maintenance History of All Weapon Systems found to Have Encountered Incidences of Primary Filter Bypass Indications are Reviewed by IUID to ID Suspect Servos



- PBA (i.e., any support arrangement based on a performance driven outcome), CLS, FMS (3 sub-scenarios)
- Describes contractor information/data interfaces needed for accountability and performance assessment (e.g., reliability, performance, contractual, readiness)
- Provides visibility into performance aspects for effective management and for baseline contract requirements



# ***“The What’s in it for Me - Big Picture”***

- Upon the attainment of IUID/SIM Full Operating Capability, DoD weapon system sustainment managers will have **dramatically improved insight into the cause-and-effect relationship between resources and readiness.**
- Capitalizing on this insight, weapon system support **decisions will both be more informed and take less time.**
- **Data-driven continuous process improvement (CPI) initiatives will be institutionalized, enabling the effective management of materiel reliability, materiel repair/replacement cycle time, and materiel sustainment cost performance-to-plan.**
- Overall **material readiness will be higher**, and overall weapon system **life-cycle cost will be lower.**
- Fully automated maintenance management (**unburdens the maintainer**)

**Performance Driven Outcomes (AKA PBL)**

# Roles and Responsibilities

Roles	Responsibilities
Program Managers	<ul style="list-style-type: none"> <li>• Define population of individual items to be marked, tracked or managed</li> <li>• Work with engineering community, contractors and depots</li> </ul>
Contracting Officers	<ul style="list-style-type: none"> <li>• Get requirements on contract</li> <li>• Insert UID clause in all supply contracts</li> </ul>
Contractor	<ul style="list-style-type: none"> <li>• Delivers UII and registers pedigree data - Work with PMs to synchronize plans</li> <li>• Maintains stewardship of GFP / Advocate a practical approach to Tech Data</li> </ul>
DCMA or Destination	<ul style="list-style-type: none"> <li>• Ensures contractor UII processes provide required outcome</li> <li>• Oversight of Government Furnished Property</li> </ul>
IUID Registry Administration	<ul style="list-style-type: none"> <li>• Establish interfaces with WAWF and Property Systems</li> <li>• Maintain the IUID Registry</li> </ul>
Storage Destination	<ul style="list-style-type: none"> <li>• Receipt transactions involving UIIs</li> </ul>
Top Level Accountability Systems	<ul style="list-style-type: none"> <li>• Receipt transactions involving UIIs</li> <li>• Maintain UII accountable property records current and correct in the applicable system of record. Report lost, destroyed or expended UIIs</li> </ul>
Maintenance Activities	<ul style="list-style-type: none"> <li>• Receipt transactions involving UIIs / Work with PMs ID Parts and plan implementation</li> <li>• Mark legacy items as required / Work with engineering, contractors, other depots</li> </ul>
Disposal (DoD 4160.21M)	<ul style="list-style-type: none"> <li>• Receipt transactions involving UIIs</li> <li>• Report disposition of UIIs</li> </ul>

# The “Take-aways”

- IUID is a business **transformation** enabler that facilitates **significant benefits** within the maintenance and operational environments.
- **Maintenance organizations and activities play a key role** in the overall implementation of legacy parts marking ... but they also **derive significant benefits**

## Therefore

- Maintenance Managers/Activities **must become involved in implementation planning** and promulgate the use of IUID across the maintenance environment
  - To “do something with the IUID mark” requires:
    - Adopting/developing **effective SIM processes** and procedures
    - Getting IUID/SIM requirements **structured into your AIS**
    - **Collaboration** and unity of effort

I + T = M

**Even if you're on the right track, you'll get run over if you just sit there.**

*Will Rogers*

# Online Resources

- UID Website
  - <http://www.acq.osd.mil/dpap/uid>
- IUID Toolkit
  - <http://www.iuidtoolkit.com>
  - Four tracks: PMs, Suppliers, Depot, Warfighter
- DAU UID Special Interest Area
  - Within Acquisition Community Connection  
[https://acc.dau.mil/simplify/ev.php?ID=18058\\_201&ID2=DO\\_TOPIC](https://acc.dau.mil/simplify/ev.php?ID=18058_201&ID2=DO_TOPIC)

The background of the slide is a stylized, semi-transparent American flag. The stars and stripes are visible but faded, creating a subtle patriotic backdrop. The text "Questions?" is centered over the flag.

Questions?