

Item Unique Identification (IUID)



Prepared for: PACS meeting

April 2010

Presented by:
Gilles Vergnerie

Plan

- **Complementary Identification systems**
- **What is UII?**
- **How to create UII**
- **UII Registry**
- **Cost benefits aspects**

Facing new challenges...

Challenges:

- *Rapidly moving forces on a dynamic battlefield*
- *Demand for better information on assets*
- *Need for more effective visibility and management of inventory*



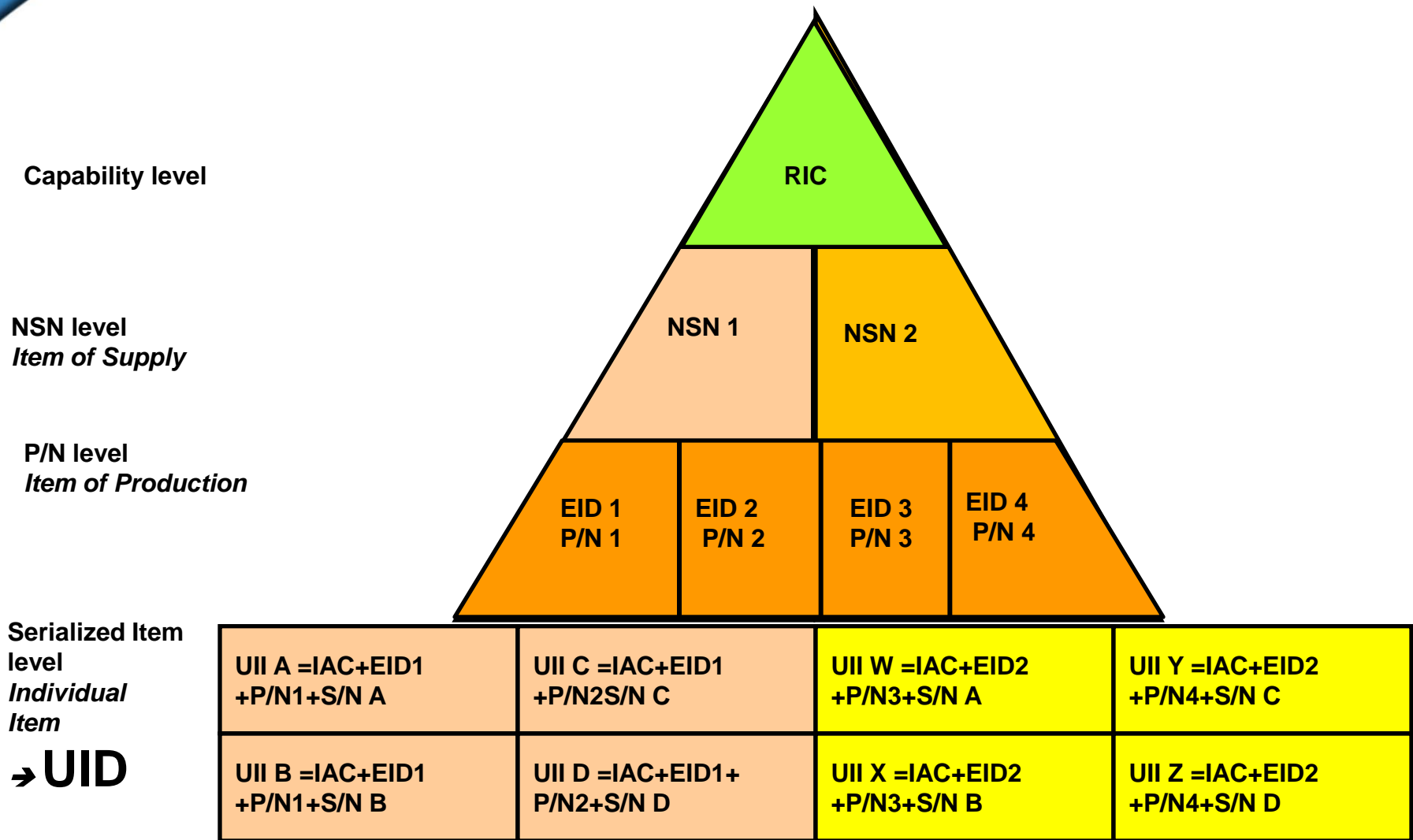
How to meet them:

- *Improve business processes now*
- *Improve confidence*
- *Influence the direction and cost of technology development*
- *Drive the standards to work for us*
- *Facilitate the implementation of Item Unique Identification (IUID)*

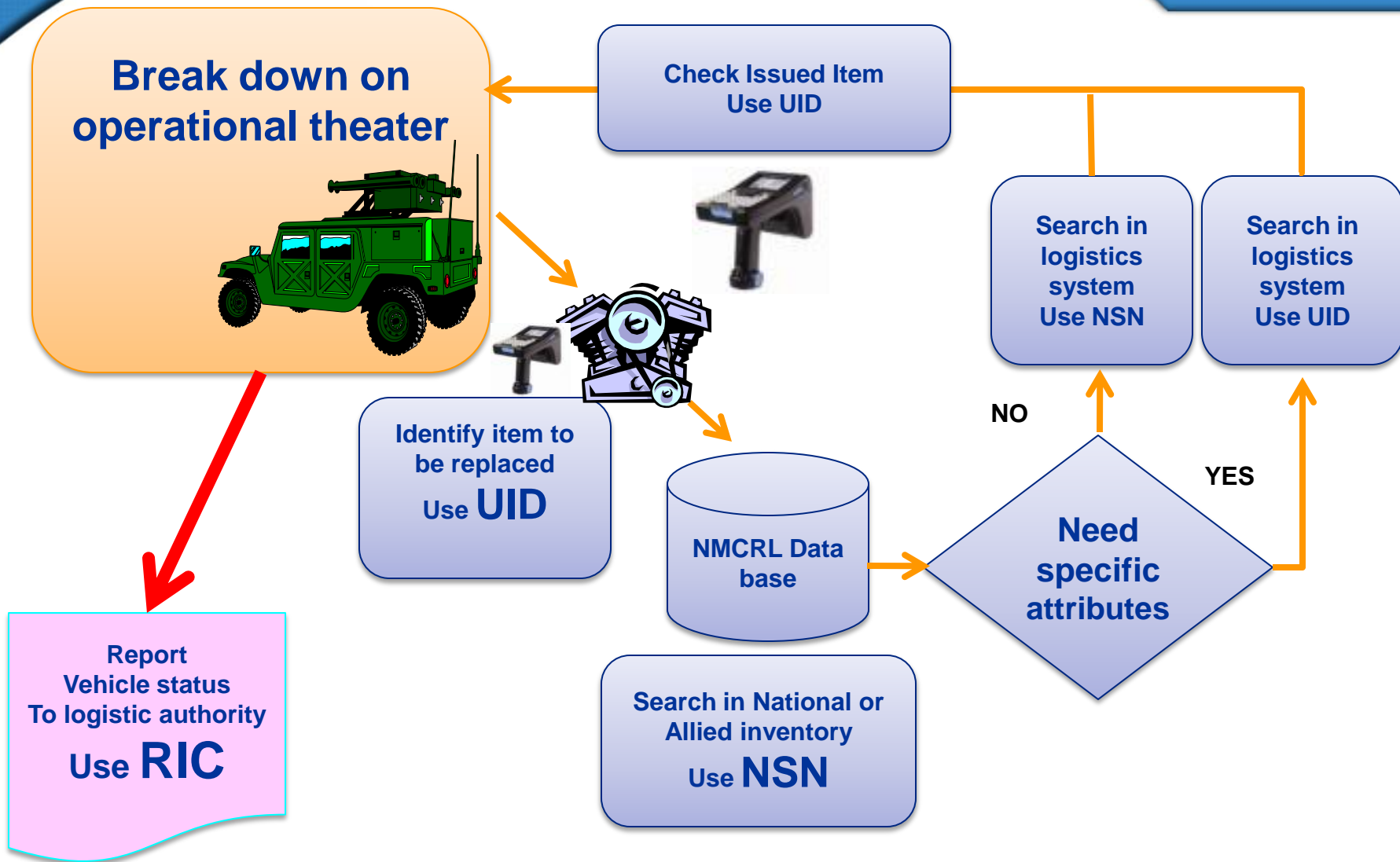
Complementary Identification systems for specific rationales

- **Reportable Item Code: RIC**
 - identify an operational capability in the same way for all the forces in a joined operation.
- **Item of supply: NSN**
 - gives a standardized way to describe and a unique identification number for an Item of supply (same fit, form and function) .
- **Item of production: PN**
 - Number given by each producer to distinguish between its own products.
- **Unique Identifier: UID**
 - Is an asset identification system to uniquely identify a discrete tangible item or asset and distinguish it from other like and/or unlike tangible items.

RICs, NSN, PN & UID



RIC, UID and NSN supporting operational logistics



IUID: What makes it special?

IUID...

- Provides ***“The Key”*** to discovery and correlation of item, real property and human resource information so logistician can ***consistently locate, control and value assets*** anywhere and anytime
- Enables ***globally accessible and secure*** enterprise data
- Registries enable ***creation of IUID mission critical services*** to:
 - Translate legacy data for existing logistic systems
 - Enable access for operational support
 - Enable joint paperless management

Defining the Scope of IUID

A UII Is	A UII Is Not
<ul style="list-style-type: none"> ✓ A Data Element ✓ A Unique Identifier for an Item ✓ Globally Unique ✓ Unambiguous ✓ Permanent ✓ Created by Concatenating Specific Data Elements ✓ The enabler for business intelligence 	<ul style="list-style-type: none"> ✓ A transmitting technology for Communicating Data, such as Radio Frequency Identification (RFID) Tags or Contact Memory Buttons ✓ A Replacement for the National Stock Number ✓ An Intelligent Data String that Yields Information About the Item ✓ Transferable from one item to another

UID Principle



ToeSock Co Gun Co

Part # 1477896 Part # 1477896

In today's world, every producer use its own part numbers.

2 identical items from the same producer have the same part number.

Moreover this same part number could represent another item by another manufacturer.

Some items do have serial numbers.

Serial numbers are unique, but only for a specific item. Or only for the products of a specific manufacturer

By combining enterprise identification and serialization, a globally unique item identifier is created that differentiates every item from every other item.

Each item has its own globally unique item identifier (UII).



What is the Unique Item Identifier (UII)?


- **The unique item identifier (UII) is a globally unique and unambiguous identifier that distinguishes an item from all other like and unlike items.**
- **The UII is a concatenated value which is marked on items in line with STANAG 2290 prescriptions.**
- **This concatenated value should be readable with automated means**
- **Each UID is linked to a registry which includes other identification and logistic data**

Unique Item Identifier (Ull) is...



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

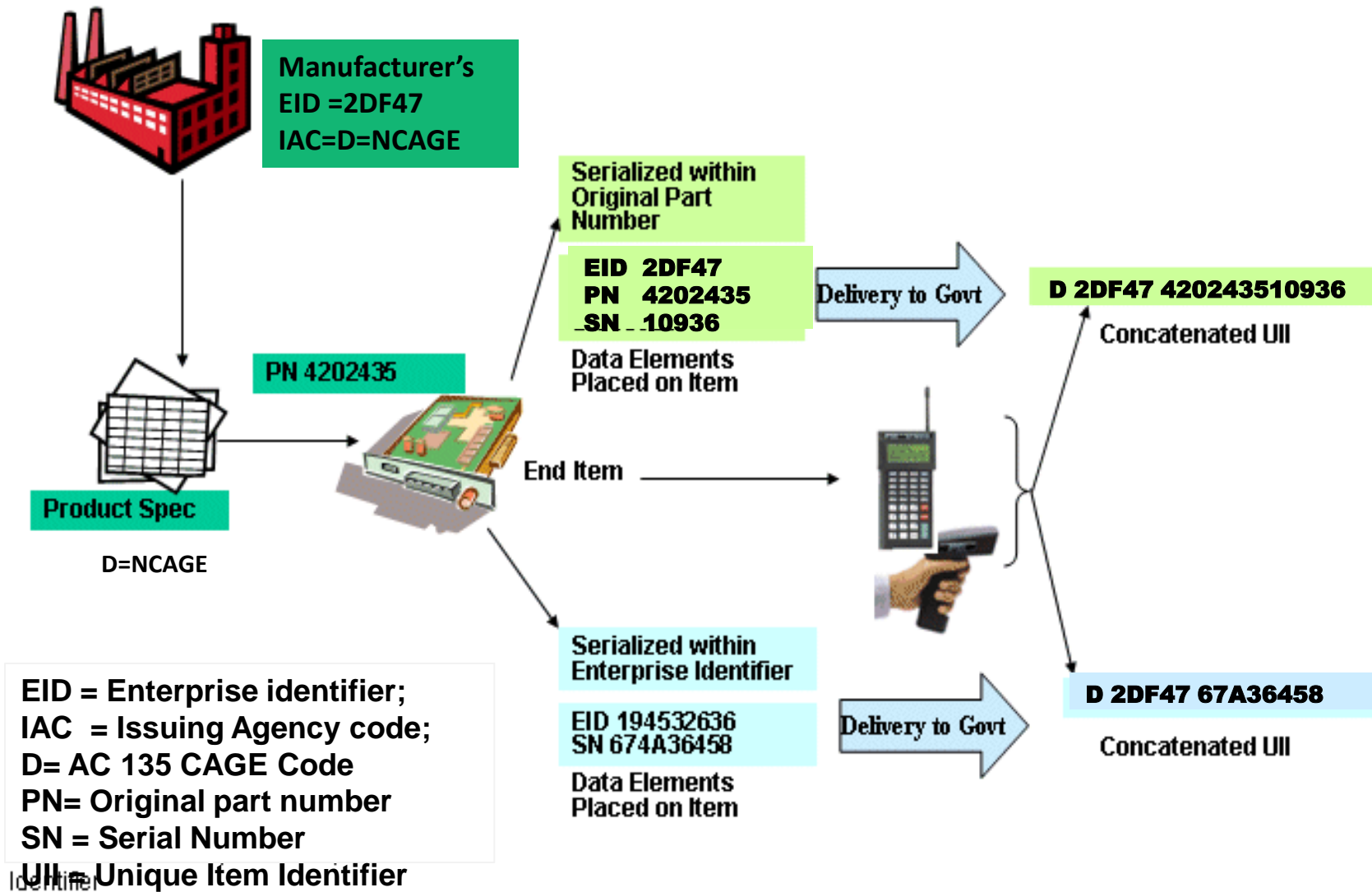
Enterprise identifier organism D

EID	2AD3N	
PN.	1PW1234	
SN	S786950	
Ull	D2AD3N1PW1234S786950	

D= AC 135 CAGE Code
EID = Enterprise identifier;
PN= Original part number
SN = Serial Number
Ull = Unique Item Identifier

In order for readers to be able to read a 2D Data Matrix, the mark **MUST** conform to quality standards, as specified in STANAG 2290

UII creation process



Automatic Identification Technologies

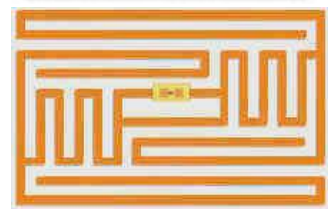
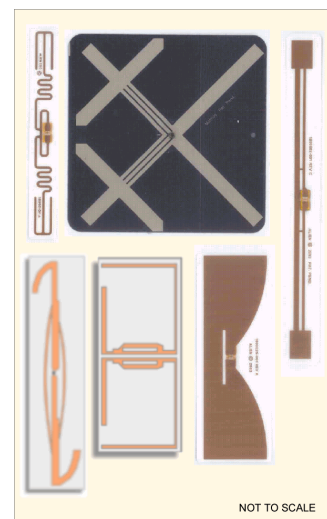


1D Barcode

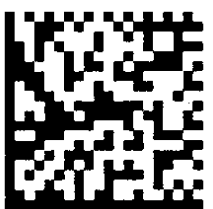


Contact Memory Buttons

Passive RFID Tags



2-D Barcodes



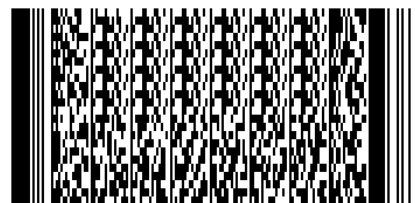
Data Matrix



QR Code



MaxiCode



PDF417



Bullseye

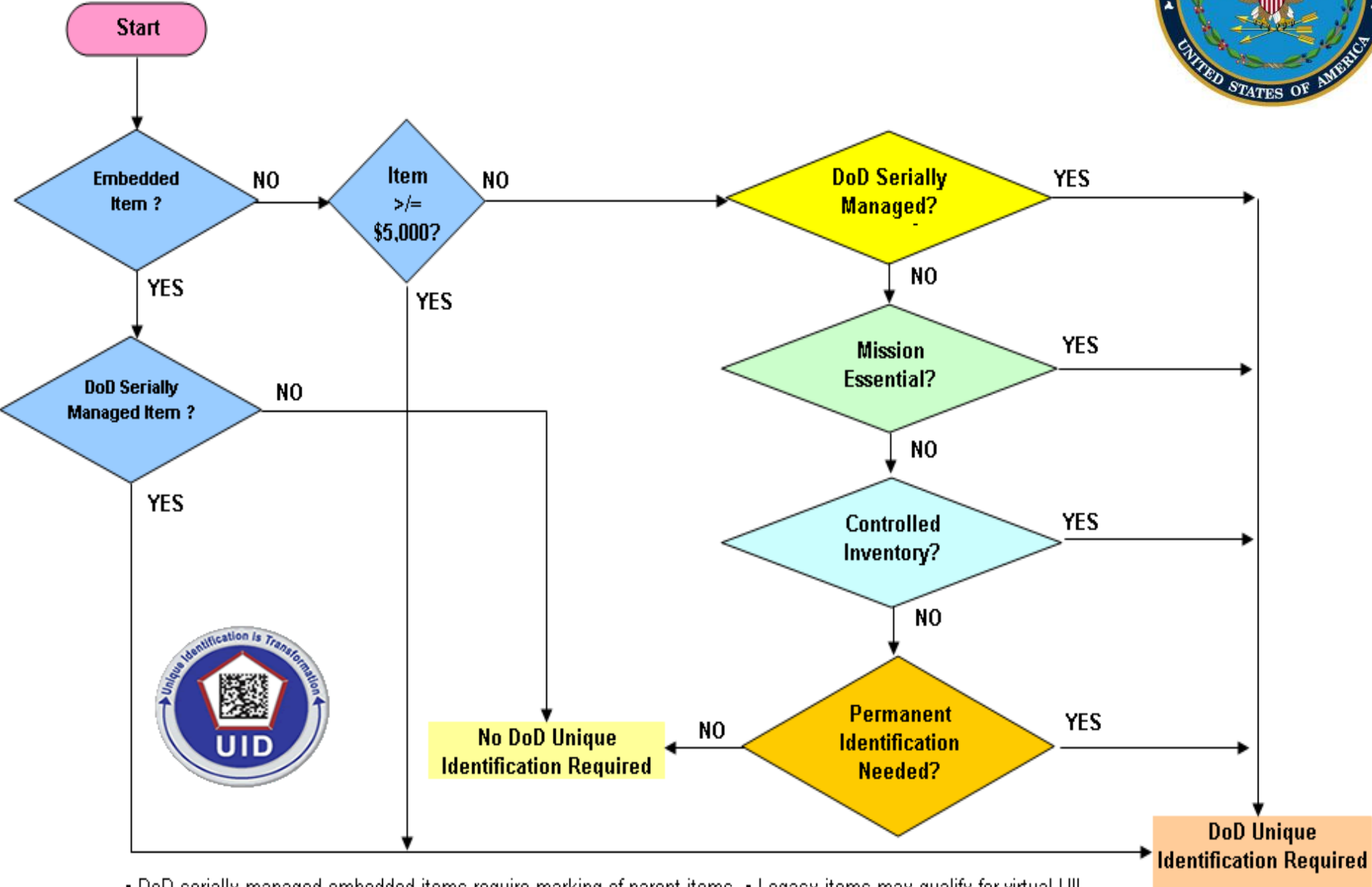


Aztec

Active RFID Tags

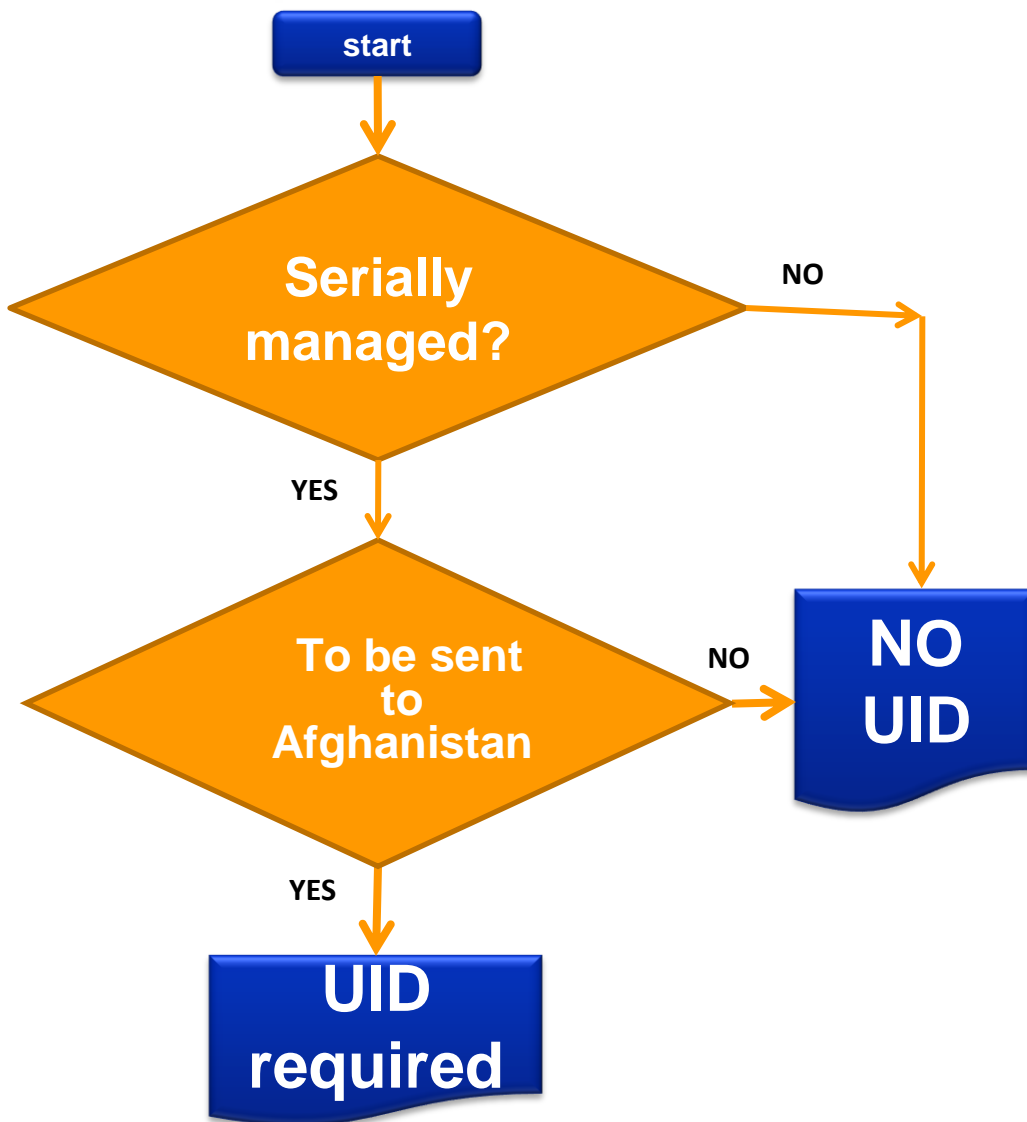


UID for which items? (US example)



• DoD serially managed embedded items require marking of parent items • Legacy items may qualify for virtual UII

UID for which items? (larger granularity)



To produce UID only for Item serially managed which could be used in Joined operations

Registry

- **Each UID is linked to a registry which includes core logistic data.**
- **NAMSA created the following one:**

NAMSA Registry

NAMSA UID Registry Project based on US DOD IUID_flat_file_specification_1-0.pdf

A Alphabetic characters only (a-z, A-Z)
AN Alphanumeric characters (a-z, A-Z, 0-9)
DT Date in the format CCYY-MM-DD (i.e. 2005-07-15).
Nv Numeric; no special characters

C Conditional; requirement depends on value or appearance of other elements.
I Not used when sending data to the IUID Registry.
M Mandatory; must always be provided.
O Optional; may or may not be provided.

**N
A
M
S
A**

N°	Field Name	Format	Min/Max	Req	Description	
1	UII	AN	1/78	M	The Unique Identifier that ensures uniqueness of all items listed in the registry.	Y
2	Item type	A	3/3	M	Flag that identifies the item as an end item or an embedded item. Values : END – End Item / EMB – Embedded Item (in relation with field 25 - Parent UII)	Y
3	Population Type	A	3/3	M	Flag that identifies the population an item belongs to. Values: NEW – Newly purchased item / LEG – NAMSA owned item in NAMSA stock / NFP – NAMSA owned item in the custody of a contractor	Y
4	Compliant Mark Flag	A	1/1	M	Flag that states whether the UII is marked on the item in compliance with IUID Policy. Values: Y – Marked in compliance / N – Not marked in compliance	?
5	UII Type	AN	3/10	M	Designator to indicate which method has been used to uniquely identify an item. Values: UID1 - UID Construct 1 / UID2 - UID Construct 2 / VIN - Vehicle Identification Number / GRAI - Global Returnable Asset Identifier / GIAI - Global Individual Asset Identifier / ESN - Electronic Serial Number / OTHER - For UIIs without an assigned UII Type	Y
6	Issuing Agency Code (IAC)	AN	1/3	C	Designator to indicate which code was used in the Enterprise Identifier. Required if UII Type is UID1 or UID2. Values: D – CAGE / LB - ANSI T1.220 / LD – DoDAAC / LH – EHIBCC / UN – DUNS / 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9 - GS1 Company Prefix	Y
7	Enterprise Identifier	AN	1/13	C	Code identifying the Enterprise that assigned the item with the UID data elements. If UII Type is UID1 or UID2, this is the same Enterprise Identifier that was used in the construct. Required if UII Type is UID1 or UID2.	Y
8	Batch/Lot	AN	1/20	C	The batch/lot identification of the item if applicable. Required if the UII Type is UID2 and the Lot/Batch was used within the UII.	Y
9	Original Part Number	AN	1/32	C	The Enterprise assigned Part Number corresponding to the assigned UII. Required if the UII Type is UID2 and the Part Number was used within the UII.	Y
10	Serial Number	AN	1/30	C	The Enterprise assigned Serial Number corresponding to the assigned UII. The serial number may be within the Enterprise or within the Original Part/Batch/Lot Number. Required if UII Type is UID1 or UID2.	Y

NAMSA Registry

11	Description	AN	1/250	M	Description of the item - NATO Approved Item Name and additional data	Y	
12	Procurement Instrument Number	AN	13/25	C	Contract number under which the item was procured. This is a unique identifier for the contract, purchase order, BOA, Basic Agreement, or BPA and includes the delivery order, task order, and call number as appropriate. Required from Vendors for new procurement; not required when reporting legacy or embedded items.	Y	
13	Procurement Prime Contractor Identifier	AN NO	5/5 9/9	C	The 9-digit DUNS or 5-character CAGE of the contractor that is responsible for reporting all UILs of the delivered items to the Government. Required from Vendors for new procurement; not required when reporting legacy or embedded items.	Y	
14	Procurement Line Item	AN	1/8	C	The purchase contract line item. Required from Vendors for new procurement; not required when reporting legacy or embedded items.	Y	
18	Acquisition Cost	R	2/18	C	Unit Price as defined in the procurement contract or as defined at delivery by the contractor. Required from Vendors for new procurement; not required when reporting legacy or embedded items.	Y	
19	Foreign Currency Code	AN	3/3	C	International Organization of Standardization code from ISO 4217 representing the currency unit of Acquisition Cost. Will default to "USD" if Acquisition Cost is provided and Foreign Currency Code is not.	Y	
20	Unit of Measure	AN	2/2	C	Unit of Measure associated with the Acquisition Cost of the item. Required from Vendors for new procurement; not required when reporting legacy or embedded items. (For list of codes, see ASC X12 Standards Element 355.)	Y	
21	Current Part Number	AN	1/32	O	Used only if the item's current part number is different from the Original Part Number. Must be provided if Current Part Number Effective Date is provided.	Y	
22	Current Part Number Effective Date	DT	10/10	C	The date the item was modified or changed to the current part number from a previous part number. Must be provided if Current Part Number is provided.	Y	
23	Manufacturer IAC	AN	1/3	O	Designator to indicate which code was used in the Manufacturer Identifier. Required if Manufacturer Identifier is provided. Values: see IAC (field 6)	Y	
24	Manufacturer Identifier	AN	1/13	C	Code identifying the Manufacturer that produced the item if different from the Enterprise Identifier. (field 7)	Y	
25	Parent UIL	AN	1/78	O	The UIL of the item that the item is embedded in.	Y	
26	NIIN	NO	9/9	C	NATO Item Identification Number Must be filled as soon the Item is codified in the NATO Codification System	Y	
27	CAGE/NCAGE	AN	5/5	C	NATO code identifying the Enterprise that assigned the item with the UID data elements Must be filled as soon the Enterprise is codified in the NATO Codification System	Y	

UII – Costs / Benefits approach

❑ Costs:

- Determining the depth of implementation within the SOI
- Determining marking method and location (including engineering analyses)
- Equipment, labour or contract cost for marking items
- Process changes implementation
- Acquisition or modification of IS to use UII and AIDC
- Acquisition, fielding, and sustainment cost of AIDC readers
- Communications infrastructure capability and compatibility improvements

❑ Benefits:

- Data entry and data cleansing labour saved using AIDC
- Inventory, maintenance, and logistics labour saved using AIDC
- Reduction in number of lost inventory items
- Improved configuration management
- Improved item visibility and accountability

QUESTIONS ?