



The DNA of Modern Logistics - NATO Codification

Supplier Sourced Codification Project

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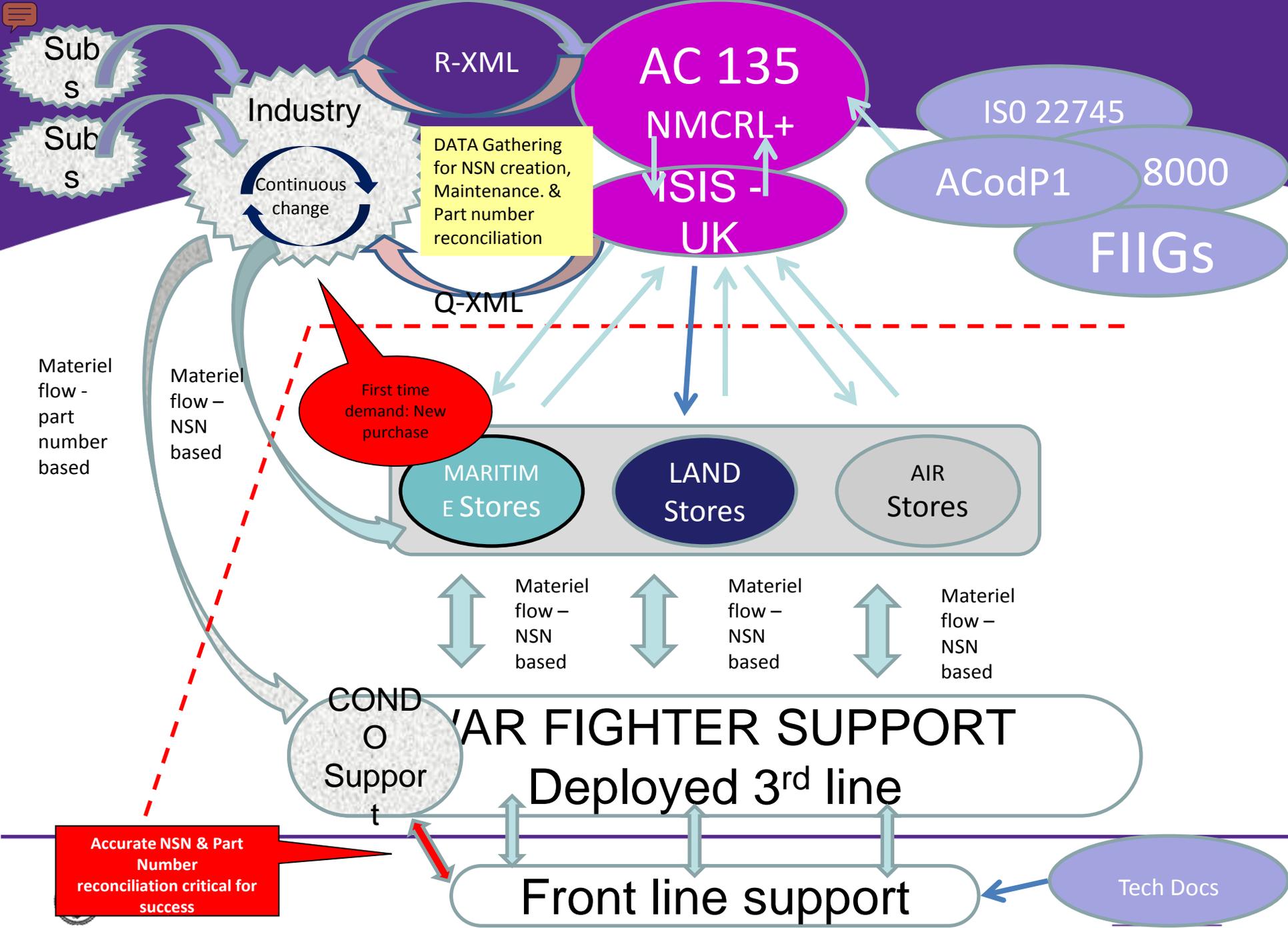
What is DATA Quality?



YOUR POINTING AT IT WON'T HELP - THE COMPUTER RECORDS SHOWS NONE IN STOCK.







DATA Gathering for NSN creation, Maintenance. & Part number reconciliation

First time demand: New purchase

Accurate NSN & Part Number reconciliation critical for success

Materiel flow - part number based

Materiel flow - NSN based

Tech Docs

JOINT SUPPLY CHAIN



The New Standards in DATA Management

ISO 8000 is an international standard which measures the quality of an entities data management.

The standard requires that a specific request for the exact requirement be made. This informs the data owner what they need to provide which allows the requestor to measure how well that requirement was met.

ISO 22745 is an international standard which facilitates the mapping of terminology dictionaries to a single source.

This in turn facilitates translation of terminology from one entity to another based on an XML schema.



Achieving Data Quality

ISO 22745/8000

Prescribes that for data to be of quality, it must have a meta data **property** (*which has an accurate definition*) and a **value** which is measurable. These **property value pairs** form the cornerstone of high quality data:

10.50 ☹️

Overall length : 10.50mm 😊

ISO 22745-30 EOTD I-XML = A list of required properties

ISO 22745-35 EOTD q-XML = The transaction of those **properties** between two entities.

ISO 22745-40 EOTD r-XML = The returned transaction with **values** completed by the master data manager



✓ Common Concept ID

eOTD Concept ID ="0161-1#02-007067#1">

Which equates to:

OVERALL LENGTH - THE DIMENSION MEASURED ALONG THE LONGITUDINAL AXIS WITH TERMINATED POINTS AT THE EXTREME ENDS OF THE ITEM.

Any other property identifiers which meet this description such as:

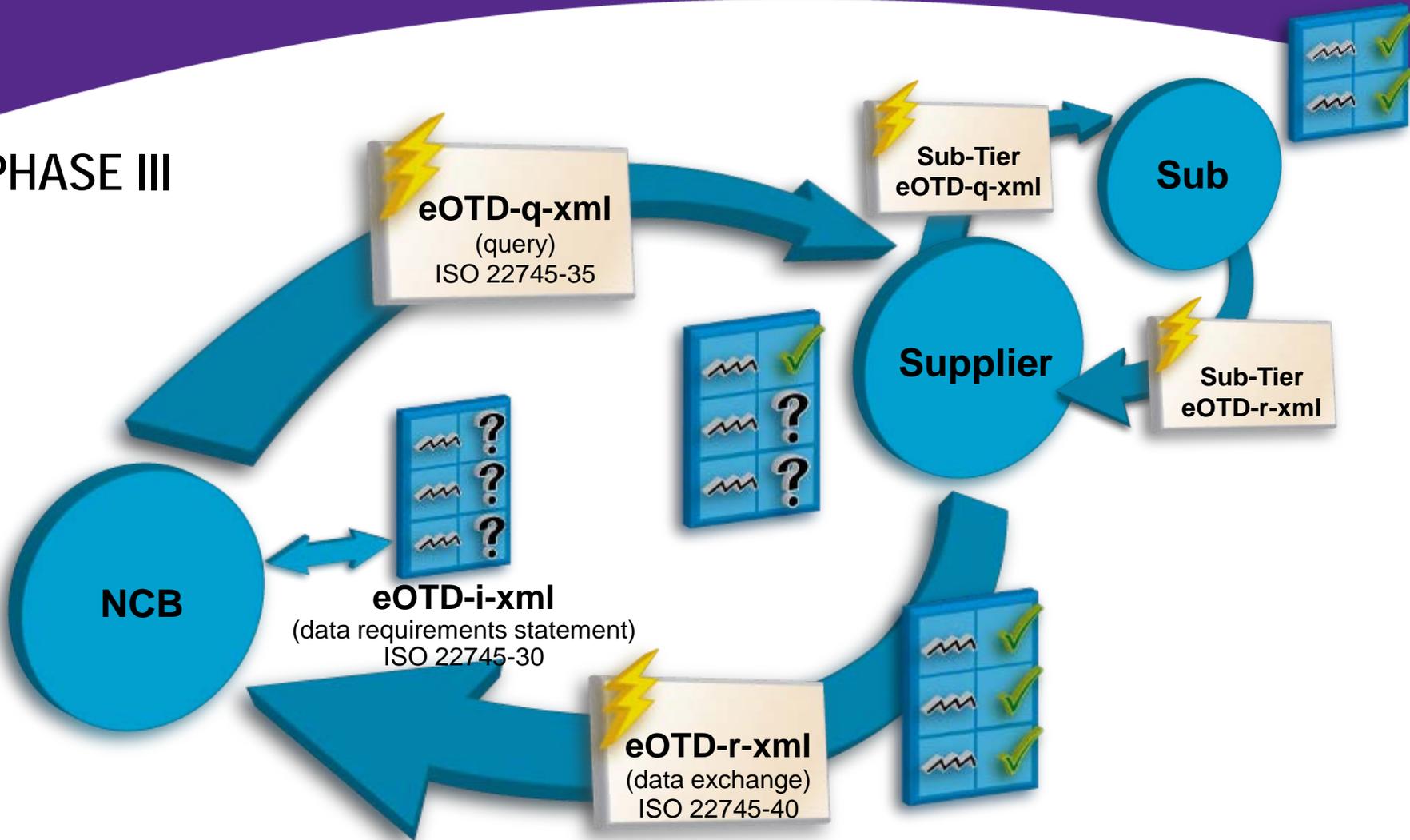
End to End length.....Total length.....Longitudinal Length.....etc....etc

Are mapped to each other within the Open Technical Dictionary



TRULY Automated Codification

PHASE III





DATA in ISO 8000 Format

<u>Property</u>	<u>Value</u>
AAQL BODY STYLE.....	2A TUBE TYPE
ABHP OVERALL LENGTH.....	19.50 MILLIMETRES MINIMUM AND 20.50 MILLIMETRES MAXIMUM
ADAV OVERALL DIAMETER.....	5.00 MILLIMETRES MINIMUM AND 5.30 MILLIMETRES MAXIMUM
AEBJ CONTINUOUS CURRENT RATING IN AMPS.....	3.150
AFXE MAXIMUM VOLTAGE RATING IN VOLTS.	250.0 AC
AFXF CIRCUIT OVER-CURRENT INTERRUPTION TYPE.....	..NORMAL INSTANTANEOUS
AFXH INTERRUPTION INDICATOR METHOD.....	VISIBLE ELEMENT
CSQN SHORT-CIRCUIT/INTERRUPT CURRENT RATING IN AMPS.....	35.0
ABDN TERMINAL SURFACE TREATMENT.....	SILVER PLATED
CBBL FEATURES PROVIDED.....	NONRENEWABLE FUSIBLE ELEMENT





NATO Mandatory Requirements

Class – VALVE BALL

Property 1 – Material

Property 2 – Style

Property 3 – Valve Operation

BAES Part Classification – 40,000,000

Class – Valve, Stainless Steel, 3 way L ported,
manually turned.





NATO Mandatory Requirements

Class – VALVE BALL

Property 1 – Material

Property 2 – Style

Property 3 – Valve Operation

BAES Part Classification 40,000,000

Class – Valve, Stainless Steel, 3 way L ported

Property 1 – Operation Method – Hand
Turned



NATO Mandatory Requirements

Class – **VALVE BALL**

ISO 22745 OTD 0161-1#01-089708#1

Property 1 – **Material**

ISO 22745 OTD 0161-1#01-056789#1

Property 2 – **Style**

ISO 22745 OTD 0161-1#01-542315#1

Property 3 – **Valve Operation**

ISO 22745 OTD 0161-1#1543256#1

BAES Part Classification – 40,000,000

Class – **Valve**

ISO 22745 OTD 0161-1#01-248615#1

Property 1 – **Material Value 1 Stainless Steel**

ISO 22745 OTD 0161-1#01-056789#1

Value - ISO 22745 OTD 0161-1#01-021587#1

Property 2 – **Configuration Value 2 - 3 way L ported**

ISO 22745 OTD 0161-1#01-254780#1

Value - ISO 22745 OTD 0161-1#154278#1

Property 3 – **Operation Method – Value 3 – Hand Turned**

ISO 22745 OTD 0161-1#245780#1

Value - ISO 22745 OTD 0161-1#012475#1





NATO NATIONAL STOCK NUMBER - 991234567

Class – VALVE BALL

ISO 22745 OTD 0161-1#01-089708#1

Property 1 – Material Value 1 Stainless Steel

ISO 22745 OTD 0161-1#01-056789#1

Value - ISO 22745 OTD 0161-1#01-021587#1

Property 2 – Style Value 2 – 3 way L ported

ISO 22745 OTD 0161-1#01-542315#1

Value - ISO 22745 OTD 0161-1#154278#1

Property 3 – Valve Operation Value 3 - Manual

ISO 22745 OTD 0161-1#1543256#1

Value - ISO 22745 OTD 0161-1#012475#1

BAES Part Number – 40,000,000

BAES Part Classification – 40,000,000

Class – Valve

ISO 22745 OTD 0161-1#01-248615#1

Property 1 – Material Value 1 Stainless Steel

ISO 22745 OTD 0161-1#01-056789#1

Value - ISO 22745 OTD 0161-1#01-021587#1

Property 2 – Configuration Value 2 - 3 way L ported

ISO 22745 OTD 0161-1#01-254780#1

Value - ISO 22745 OTD 0161-1#154278#1

Property 3 – Operation Method – Value 3 – Hand Turned

ISO 22745 OTD 0161-1#245780#1

Value - ISO 22745 OTD 0161-1#012475#1

NATO NSN – 991234567



Does this make things Faster?

Ask a cataloguer how long it takes to create 1 item and the reply will be something like ***“how long is a piece of string”***

To get the best possible comparison, I removed the cataloguer’s thinking time, and reduced the creation of NATO Stock record to a count of the mouse clicks required.

The average number of property value pairs within the UK NATO Database = 8. Each Property Value Pair requires a minimum of 3 mouse clicks.

An NSN requires an average of 24 mouse clicks to populate the descriptive data.



Supplier Sourced Codification Live Demo



Source Supplied Codification (SSC) In UK MoD

The UK delivered the first Platform (TERRIER) fully codified in accordance with ISO 8000 Pt 110 & ISO 22745:

Items on the TERRIER Bill Of Material	1879
NSNs created	920
Pre existing NSNs Screened	959

***Type 1 667 (72.5%)**

***Type 4 323 (37.5%)**

***Type 2 0 (0%)**

This is an unprecedented success in terms of data quality apparent when benchmarked against the entire UK NATO Database which has 2,618,151 items in total :

Type 1 459,178 (17%) Type 4 1,699,549 (65%) Type 2 459,424 (18%)



Does it make it Cheaper?

BAES Global Combat Systems spend **£3000** per item to bring their data to a maturity suitable to be fitted to a platform. **£1500** of that is the cost of procuring DATA.

The Test platform, TERRIER has 1879 items on its BoM.

That would have been a design cost of:

$$1879 \text{ items @ } £3000 = \mathbf{£5,637,000}$$

By implementing the ISO Standards, TERRIER was able to take advantage of pre-existing NATO Stock Number Data, the design cost was instead:

$$920 \text{ items @ } £3000 = £2,760,000$$

$$959 \text{ items @ } £1500 = £1,438,500$$

$$\text{Total Cost} = \mathbf{£4,198,500}$$

Overall saving of £1,438,500

Contracting For DATA Quality

Standard statement for inclusion as both an NCB Contract Clause and Codification Requirement statement in any standards which have NATO Codification as part of their delivery.

Supply of Source Data in support of NATO Codification

The contractor, sub-contractor or supplier shall supply identification and characteristic data in accordance with ISO 8000-110:2009 on any of the selected items covered in this contract.

Following a codification request, the Home NCB shall present a list of the required properties in accordance with the US Federal Item identification Guides.

This exchange can be in a format agreed between the vendor and home NCB. One potential format of exchange is:

- (a) The contractor, sub-contractor or supplier shall agree a contact method to which requests for identification and characteristic data in an ISO 22745-35 compliant format can be facilitated.
- (b) The contractor, sub-contractor or supplier shall respond in a timely manner to requests for characteristic data that it receives in an ISO 22745-35 compliant format and the replies shall be in an ISO 22745-40 compliant format.
- (c) All metadata shall be from an ISO 22745 compliant Open Technical Dictionary.



NATO Codification



Supporting the Warfighter