



An international not-for-profit association focused on delivering open data quality solutions.

- We manage the eOTD, the world's largest ISO 22745 open technical dictionary
- We manage a common library of open data specifications (cataloging templates)
- We help companies build their corporate dictionaries and the data specifications they need to create and measure quality data
- We host ISO 22745 catalogs that support automated replies to characteristic data validation requests (new in 2015)

Are we making progress?



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

Military/Commercial Bridge

“ ...commercial practices are not precise enough to support cost-effective military inventory management and military cataloging is far too detailed and costly for commercial purposes ...ECCMA offers a way to bridge the gulf”- Asst Dept Minister, Canadian Department of National Defense. (2004)



The eOTD is a foundation for design collaboration and industry standards.

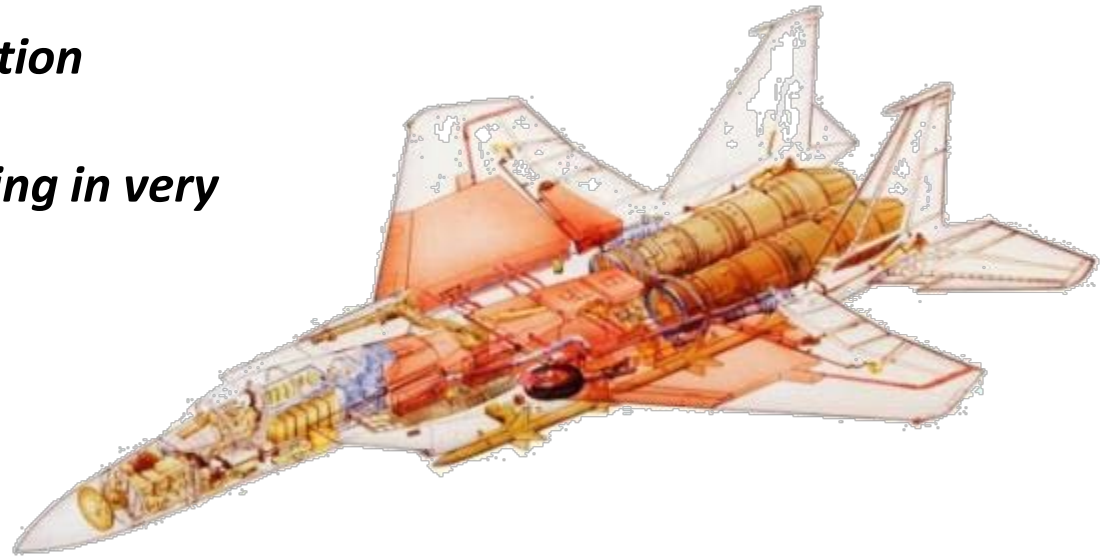
ISO 22745 and the eOTD are the foundational enablers for the breakthrough our industry needs in the next generation of direct, accurate, and effective collaboration across the supply chain at meaningful and granular levels of data exchange never before imagined.

Senior Manager,
IDS Engineering Standards Control Function
PW Knowledge and Reuse Management (KARMA)



The beginning

***“From a logistics information perspective...
an F-15 is just 171,000 parts flying in very
close formation.”***

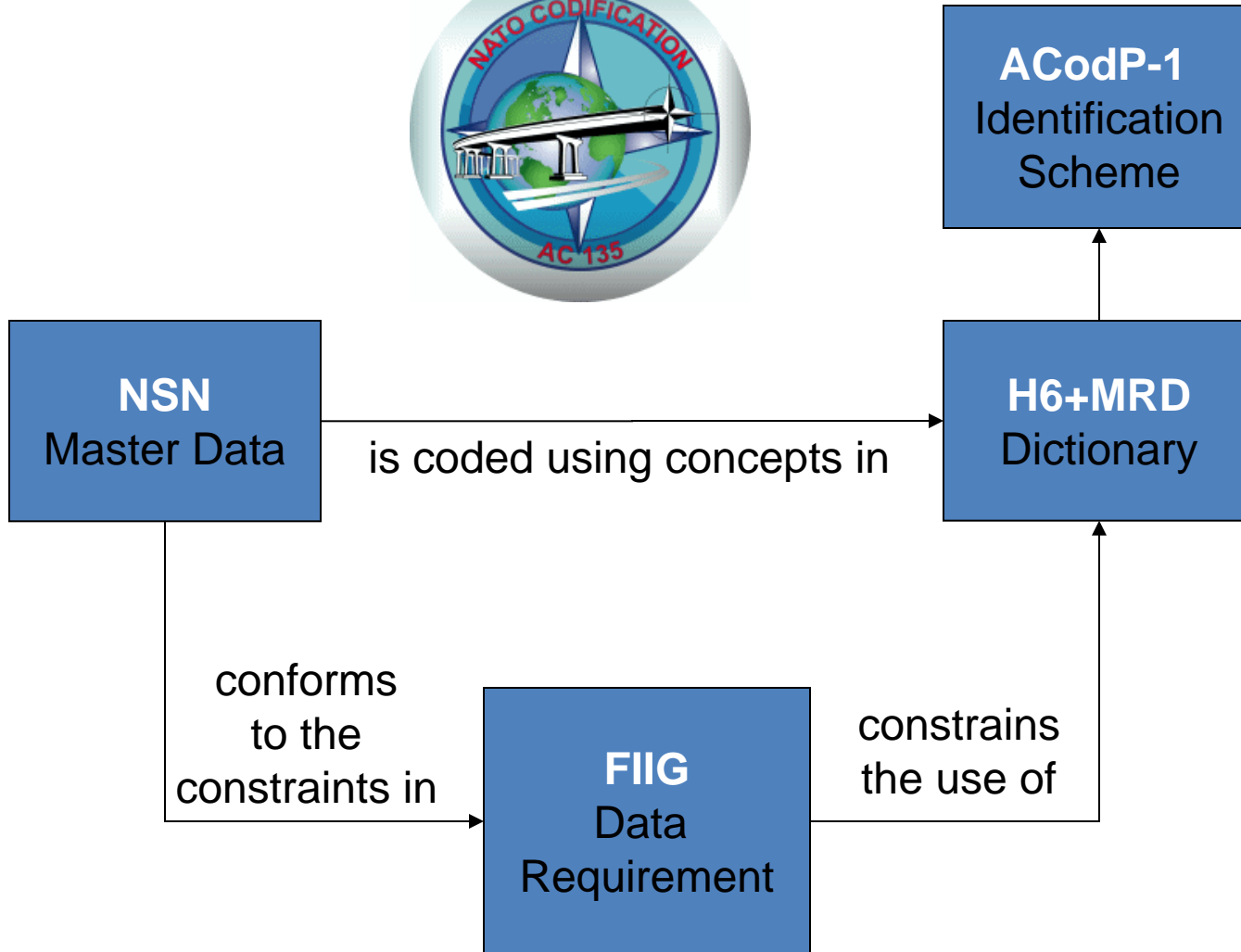


Cataloging and Standardization Act, Public Law 82-436 as codified by United States Code, Title 10, Chapter 145 – Cataloging and Standardization Sec. 2451.

(a) The Secretary of Defense shall develop a single catalog system and related program of standardizing supplies for the Department of Defense.

(b) In cataloging, the Secretary shall name, describe, classify, and number each item recurrently used, bought, stocked, or distributed by the Department of Defense, so that only one distinctive combination of letters or numerals, or both, identifies the same item throughout the Department of Defense. Only one identification may be used for each item for all supply functions from purchase to final disposal in the field or other area.

NCS Architecture



Ongoing issue



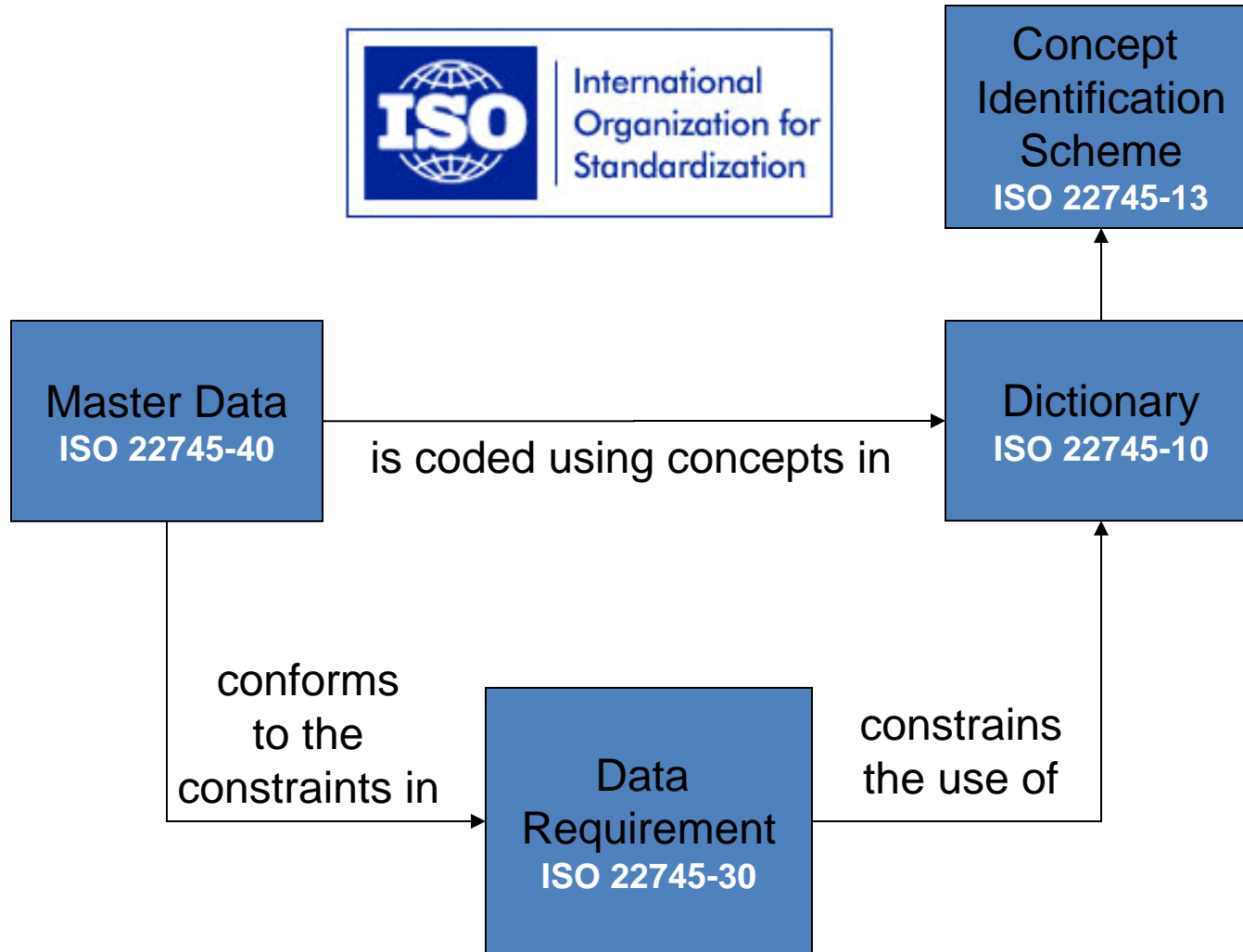
Controlling costs requires better asset, product, component and process visibility. This is achieved through faster, better and lower cost access to authoritative characteristic data.

Same issue – maybe they have a solution!

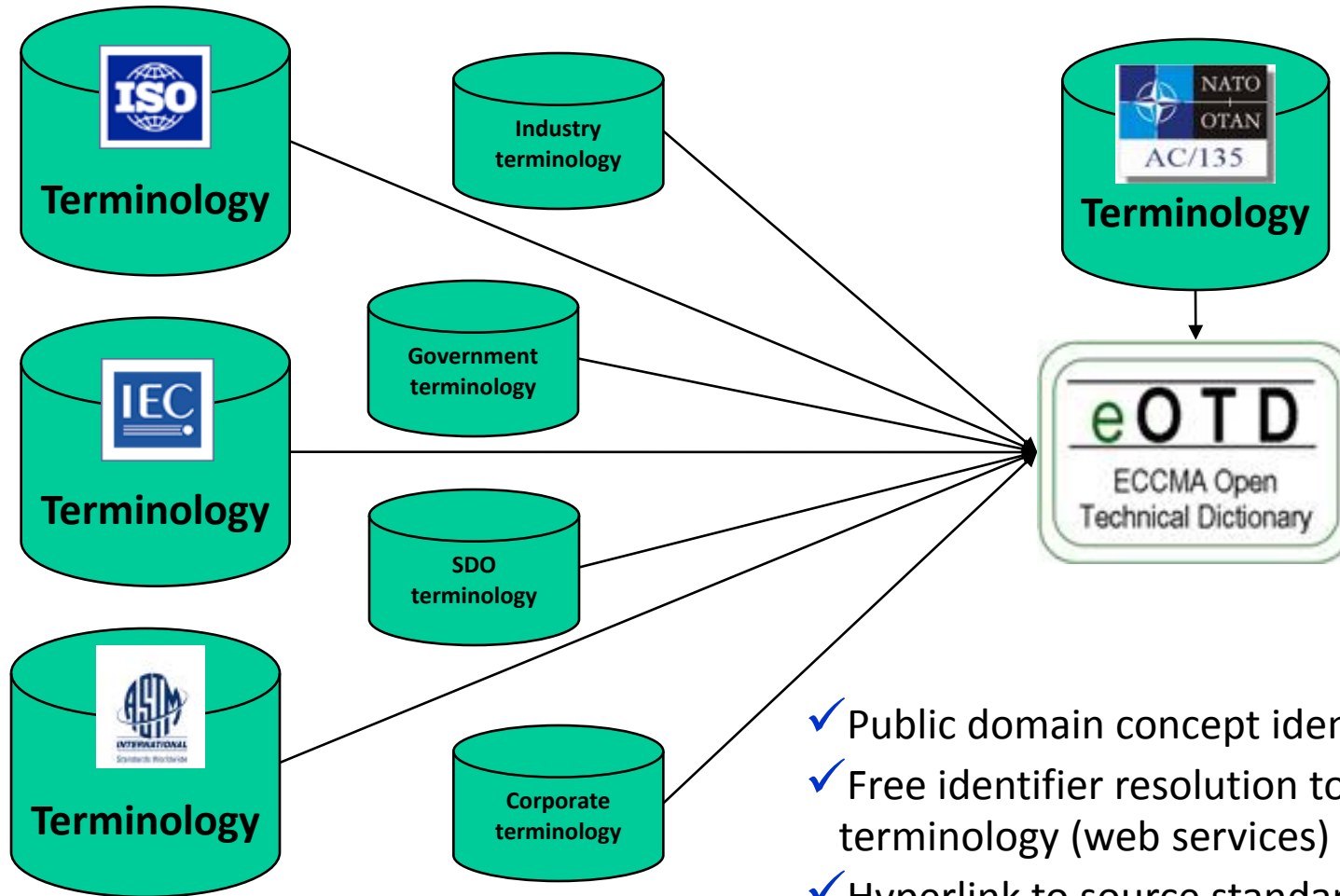


Controlling costs requires better asset, product, component and process visibility. This is achieved through faster, better and lower cost access to authoritative characteristic data.

ISO 22745 Architecture



ISO 22745 - Terminology Referenced in a Standard Model

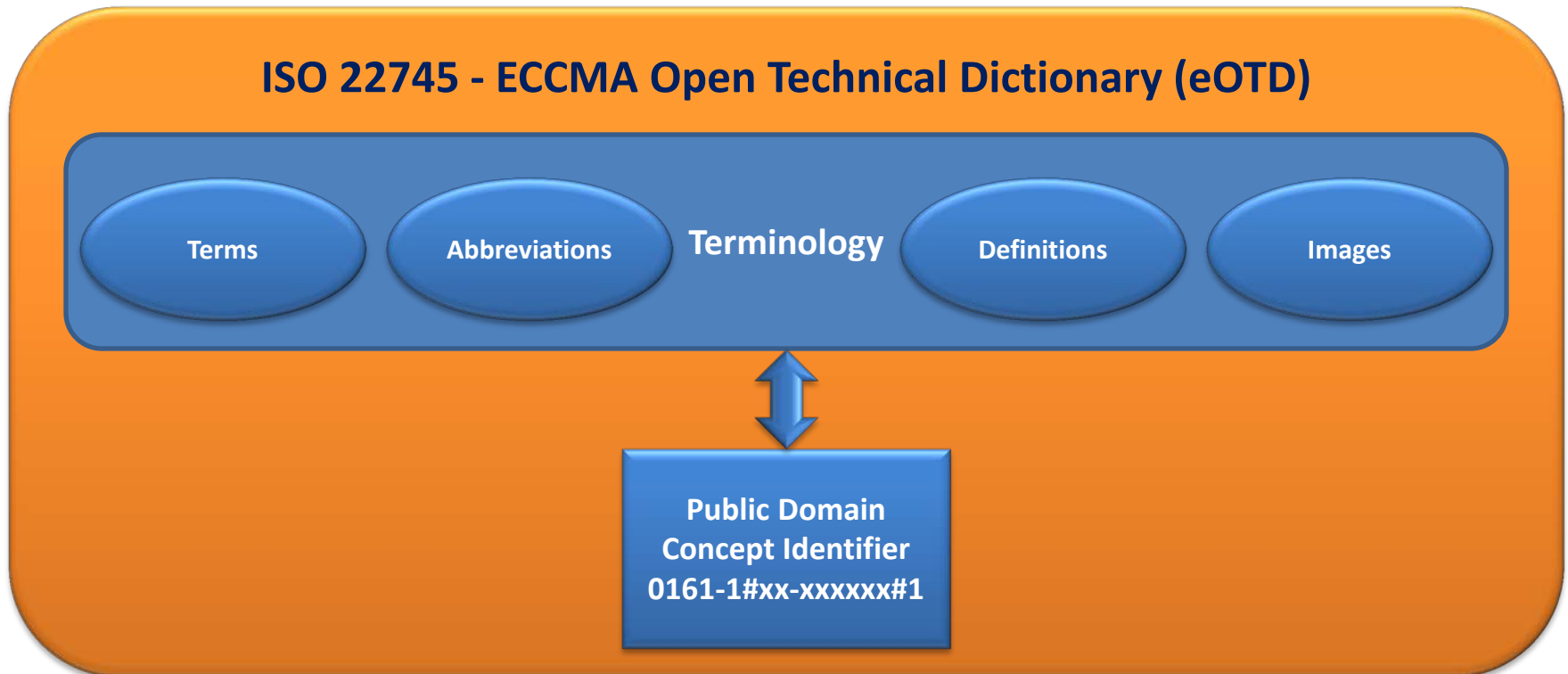


- ✓ Public domain concept identifiers
- ✓ Free identifier resolution to underlying terminology (web services)
- ✓ Hyperlink to source standards
- ✓ Multilingual
- ✓ Multiple terms, definitions and images linked to single concept identifier

Terminology Referenced in a Standard Model

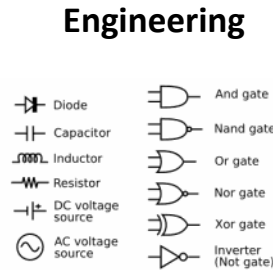
The eOTD (ECCMA Open Technical Dictionary) is an ISO 22745-20 compliant central registry of terminology. Each concept and terminological component in the eOTD is assigned a **unique and permanent public domain identifier**.

Users create their corporate dictionaries as subsets of the eOTD and use the eOTD concept identifiers to manage **concept equivalence mapping**.



ECCMA Open Technical Dictionary (eOTD)

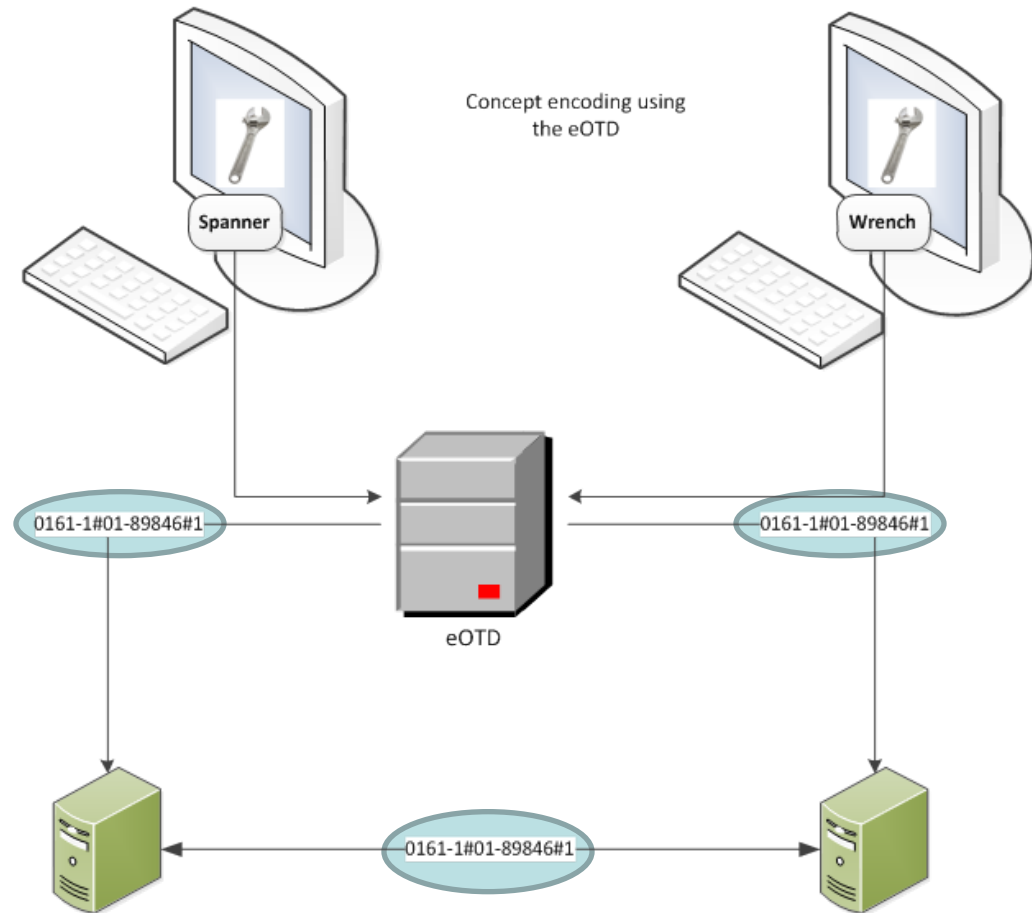
Just as with music notation and engineering symbols, the eOTD concept identifiers are simply used to communicate more accurately in a language independent environment.



eOTD

A unique public domain identifier is assigned to a concept.

0161-1#01-089388#1	table
0161-1#01-086445#1	chair
0161-1#02-018635#1	weight
0161-1#02-005808#1	length
0161-1#07-277660#1	Monday
0161-1#05-001122#1	kilogram



Applying Concept Equivalence to Enrich a Corporate Dictionary

SABIC

concept equivalence table

01-1073082	=	01-086142
01-1073082	=	01-068756

Sabic Bolt = Rockwell Bolt

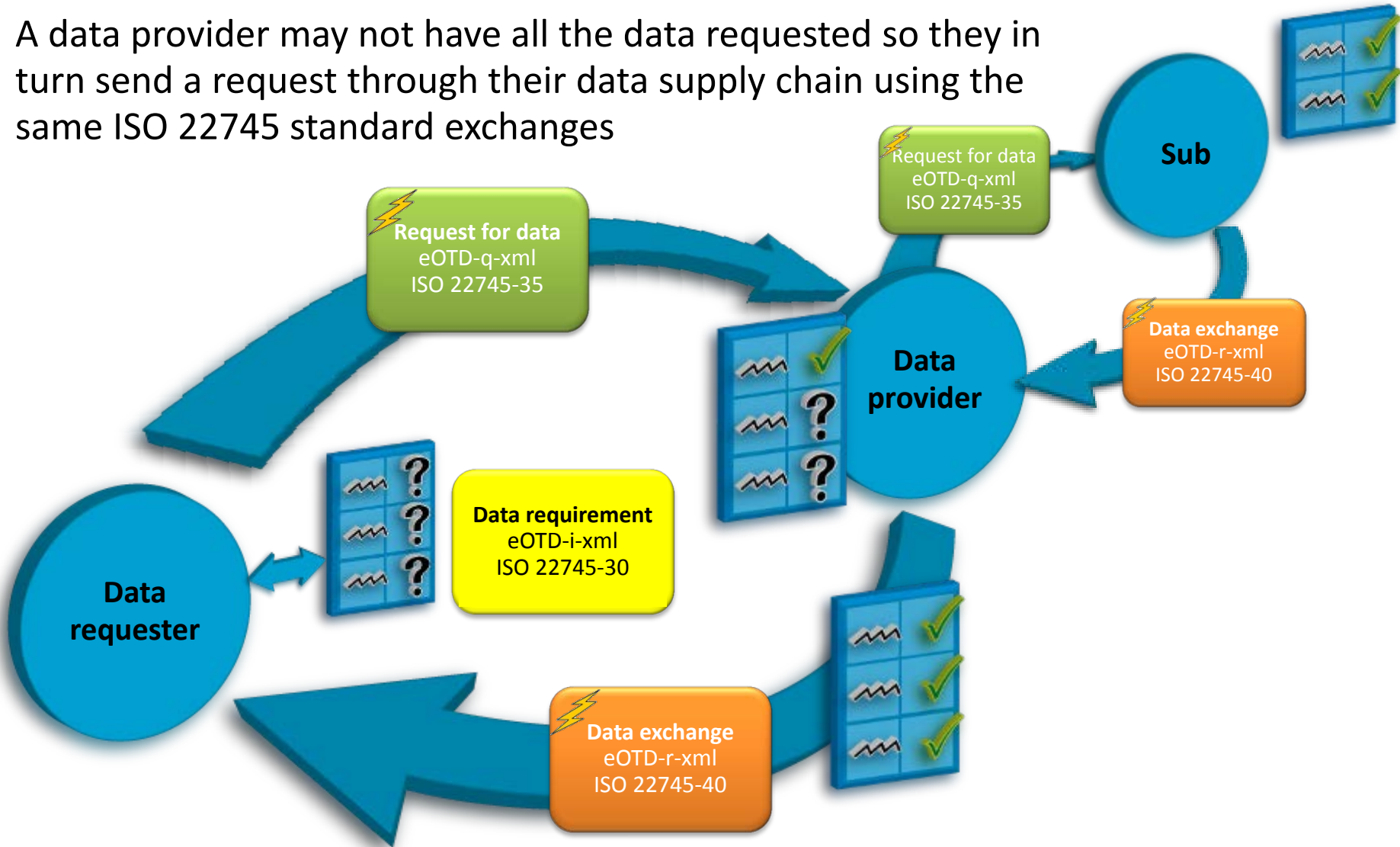
Sabic Bolt = ASTM bolt

eOTD Concept ID	Term	Ex ref	Originating Organization	Definition	Status
0161-1#01-1073082#1	BOLT	IR237	SABIC	A fastener that is externally threaded on one end and generally with some style of head on the other end and is normally intended to be tightened or released by torquing a nut and designed to fasten objects together.	Active
Equivalent concepts					
0161-1#01-086142#1	BOLT	-	Rockwell Automation, Inc	<p>A fastener consisting of a threaded pin or rod with a head at one end and designed to be inserted through holes in assembled parts and secured by a mated nut that is tightened by applying torque.</p> <p>Крепежная принадлежность, представляющая собой стержень с нарезанной резьбой и головкой на одной стороне, предназначенный для помещения в отверстия собираемых вместе деталей с последующей их фиксацией с помощью гайки, затягиваемой до определенного крутящего момента.</p>	Active
0161-1#01-068756#1	bolt	F 1789 - F16	ASTM	headed and externally threaded fastener designed to be assembled with a nut	Active

ISO 22745 in Practice

You ask for the data you need

A data provider may not have all the data requested so they in turn send a request through their data supply chain using the same ISO 22745 standard exchanges



How long and how much does it take to catalog 2,500 tires?



52368965412 – Tire Bridgestone
435/95 R25



56329845 – Tyre BS 435/R25 Standard
Purpose E3 2 Star Radial



125435 – Bridge Stone 25inch 435/95



965123465 – Tyre Bridgestone Part
Number 12345



Standardised Long Description:

Tire: Pneumatic, Vehicular: Service Type for Which Designed: Loader Tire Rim Nominal Diameter: 25'
Tire Width: 445mm Aspect Ratio: 0.95 Tire Ply Arrangement: Radial Ply Rating: 2* Tire & Rim Association Number: E3 Tread Material: Standard Tire Air Retention Method: Tubeless Tire Load Index and Speed Symbol: NA Tread Pattern: VHB TKPH Rating: 80

Standardised Short Description:

Tire Pneumatic: Loader 25' 445mm 0.95 2*

ISO 8000 referenced in a NATO contract

ASD Specification 2000M (S2000M) is a standard that specifies the information exchange requirements for most materiel management functions commonly performed in supporting international projects. S2000M is based on a business model agreed between military customers and industry suppliers.

As of Mar 2011 ASD 2000M Chapter 1B section 3.1 includes the following statement, :

The Contractor shall supply identification and characteristic data in accordance with ISO 8000-110:2009 on any of the selected items covered in his contract. Following an initial codification request as specified in section 3.2, the NATO Codification Bureau (NCB) shall present a list of the required properties in accordance with the US Federal Item Identification Guides.

Using ISO 8000 to create a quality data supply chain

The contractor, sub-contractor or supplier shall, as and when requested to do so, supply technical data in electronic format on any of the items covered in this contract as follows:

The data shall be ISO 8000-110:2009 compliant.

- *The data shall comply with registered ISO 22745-30 compliant data requirements*
- *The data shall be encoded using concept identifiers from an ISO 22745 compliant open technical dictionary that supports free resolution to concept definitions.*
- *The data shall be provided in ISO 22745-40 compliant Extensible Markup Language (xml).*

Faster – Better – Cheaper access to Authoritative Master Data

- Providing the data necessary for the “safe and efficient” operation of plant and equipment is an established legal requirement in most countries.
- Creating ISO 8000-110:2009 compliant data does not require the payment of any license fees or the use of specialized software, it is within the technical ability of all suppliers regardless of their size.

1

NATO commissions a cost/benefit analysis study



2

*Based on the current Time/Costs for the creation of an NSN within UK NCB, there is the **potential to save up to £756,563.25** per annum from the codification budget. This **is 75% of its annual codification budget**, if all transactions were completed in ISO 22745 format and contract changes were applied.*



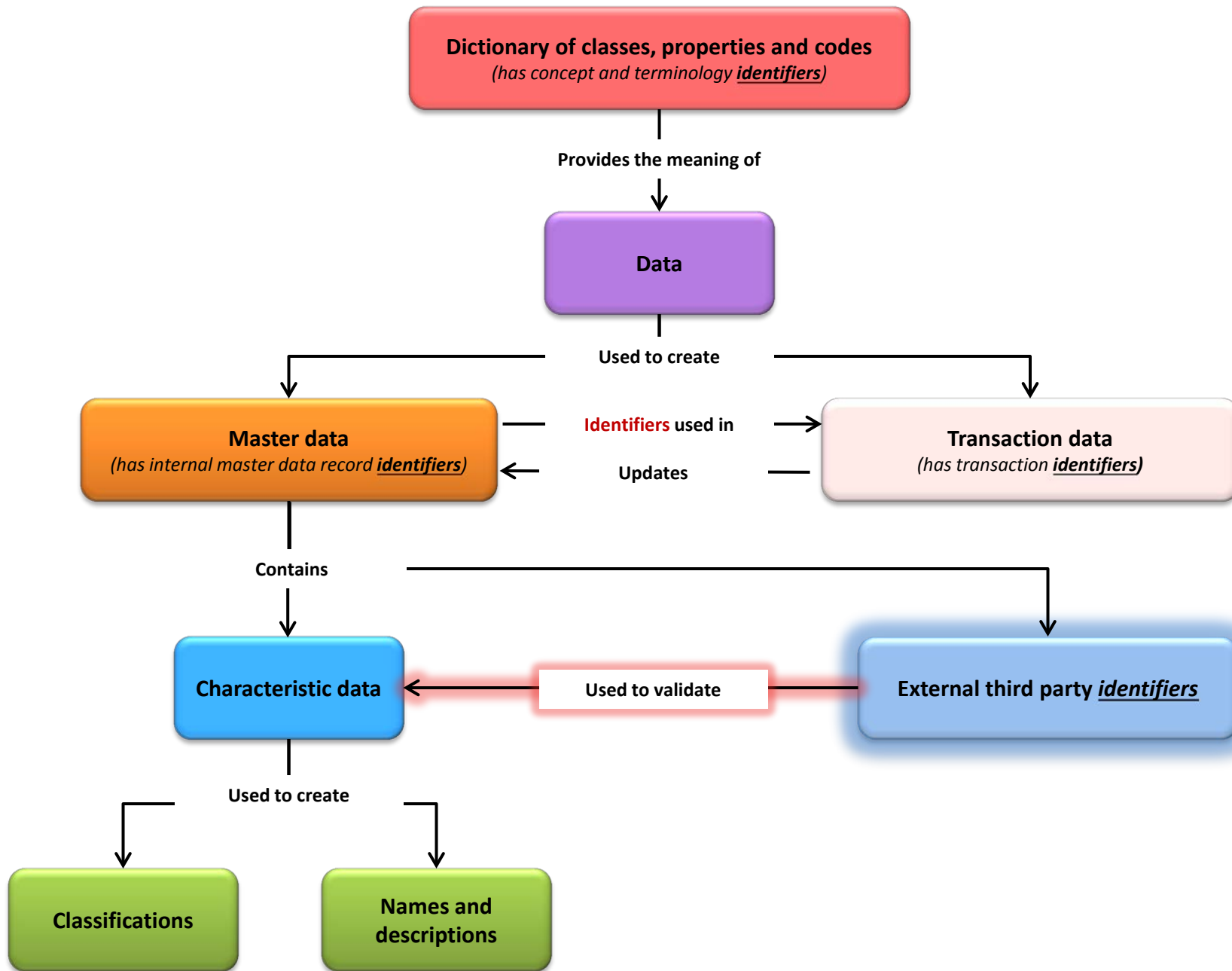
3

UK MOD reduces UK codification staff by 75%



- **Cataloging is the practice of creating or validating a master data record**
 - There are many commercial cataloging software applications
 - Commercial cataloging (aka master data cleansing) as a service is a commodity (\$4-\$8 per item for materials)
 - SAP is developing industry standard cataloging templates for MRO
 - Cataloging is being applied to services



Identifiers are the keys needed to unlock quality data



- **Automated characteristic data acquisition and validation**
 - Standardized identifier formatting that identifies the owner of the identifier
 - Standardized identifier resolution using ISO 22745

Owner.Database:Identifer

Identification data			
Property name	Value	Source date	Source organization
NATO STOCK NUMBER	DLIS:4820-01-0130242	2013-04-24	DLIS
SUPPLIER REFERENCE	GRAINGER:1WBL7	2013-04-24	GRAINGER
MANUFACTURER REFERENCE (ALTERNATE)	SWAGELOK:SS-AFSS12	2013-04-24	GRAINGER
MANUFACTURER REFERENCE (PREFERRED)	PARKER:4Z-MB4LPFA-SSP	2013-04-24	PARKER

Identification Data			
Property Name	Value	Source Date	Source organization
MANUFACTURER REFERENCE	SKF:7320 BECBM	 2013-05-24	SABIC
MANUFACTURER REFERENCE	SKF:7320 BEC BM/DB/C3	 2013-05-24	SABIC

Material Number	Date Updated
2405328	2013-04-24



2013-04-24:DLIS

Characteristic data

Property name	Value	Source date	Source organization
CLASS	VALVE,BALL	2013-04-24	DLIS
THREAD CLASS	2A ALL ENDS	2013-04-24	DLIS
BODY MATERIAL	STEEL COMP 316	2013-04-24	DLIS
PIPE SIZE	¼ INCH	2013-04-24	GRAINGER
CONNECTION STYLE	G46A PLAIN (TUBE) ALL ENDS	2013-04-24	DLIS
MAX PRESSURE	2500PSI	2013-04-24	GRAINGER

Identification data

Property name	Value	Source date	Source organization
NATO STOCK NUMBER	DLIS:4820-01-0130242	2013-04-24	DLIS
SUPPLIER REFERENCE	GRAINGER:1WBL7	2013-04-24	GRAINGER
MANUFACTURER REFERENCE (ALTERNATE)	SWAGELOK:SS-AFSS12	2013-04-24	GRAINGER
MANUFACTURER REFERENCE (PREFERRED)	PARKER:4Z-MB4LPFA-SSP	2013-04-24	PARKER
STANDARD REFERENCE NUMBER	ASTM:A 276 Type 316	2013-04-24	ASTM

Material Number	Date Updated
KSA:2006992	2013-05-24

No Image

Submit

Brow

Short Description

BEARING,BALL,ANNULAR, 100MM, 215MM, 47MM

Long Description

BEARING,BALL,ANNULAR, DESIGN TYPE:ANGULAR CONTACT,CONRAD, INSIDE DIAMETER:100MM, OUTSIDE DIAMETER:215MM, WIDTH:47MM, SHIELD TYPE AND QUANTITY:OPEN, ROW QUANTITY:SINGLE, MATERIAL:BRASSCAGE, REPLACEMENT DESIGNATION:15102

Characteristic Data

Property Name	Value	Source Date	Source organization
<u>Class</u>	<u>BEARING,BALL,ANNULAR</u>	2013-05-24	SABIC
<u>DESIGN TYPE*</u>	ANGULAR CONTACT,CONRAD,METRIC /	2013-05-24	SABIC..
<u>TYPE/MODEL DESIGNATION*</u>	7320BECBM /	2013-05-24	SWCC
<u>INSIDE DIAMETER*</u>	100MM /	2013-05-24	SABIC..
<u>OUTSIDE DIAMETER*</u>	215MM /	2013-05-24	SABIC..
<u>WIDTH*</u>	47MM /	2013-05-24	SABIC..
<u>BORE TAPER</u>	/		
<u>SEAL TYPE AND QUANTITY*</u>	/		
<u>SHIELD TYPE AND QUANTITY*</u>	OPEN /	2013-05-24	SABIC
<u>ROW QUANTITY</u>	SINGLE /	2013-05-24	SABIC..
<u>CLEARANCE</u>	/		
<u>MATERIAL</u>	BRASS /	2013-05-24	SABIC
<u>NOMINAL CONTACT ANGLE</u>	/		
<u>DUTY TYPE</u>	MEDIUM DUTY /	2013-05-24	SWCC
<u>REPLACEMENT DESIGNATION</u>	15102 /	2013-05-24	SABIC
<u>SPECIAL FEATURES</u>	/		

*- Mandatory

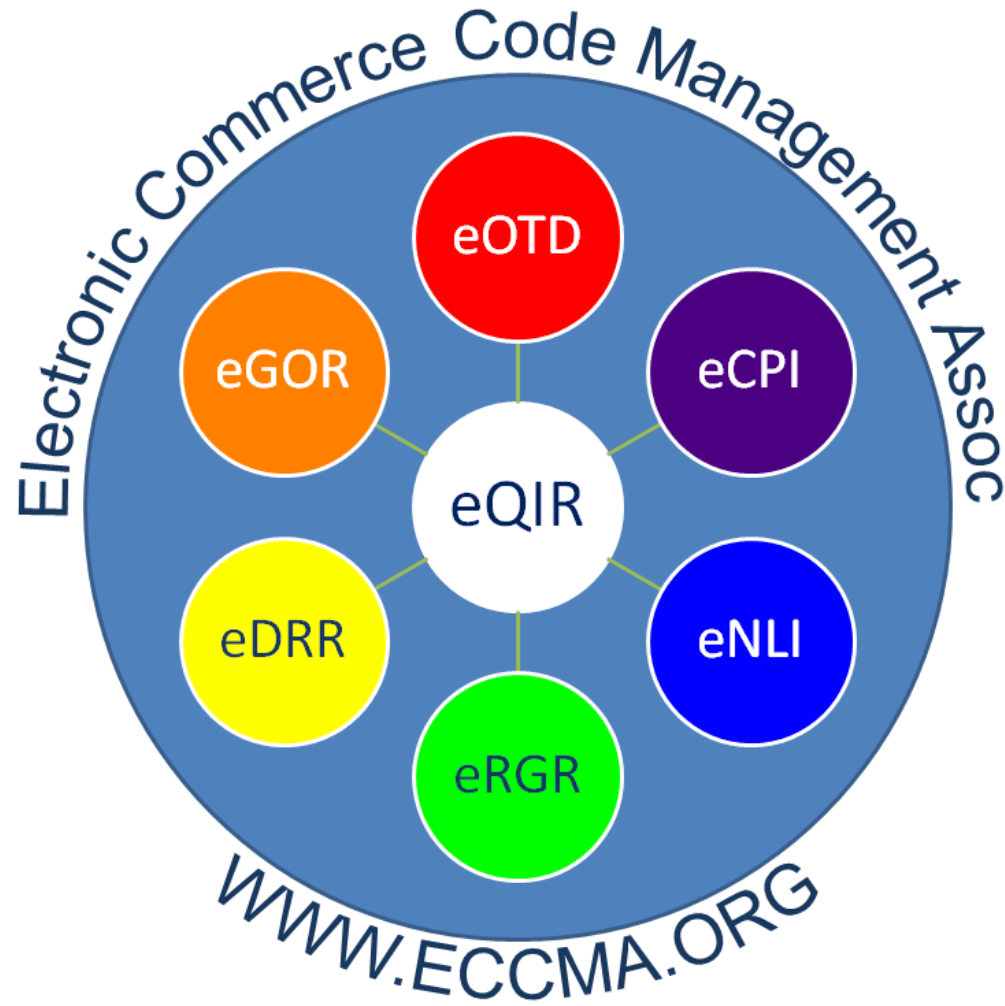
Identification Data

Property Name	Value	Source Date	Source organization
<u>MANUFACTURER REFERENCE</u>	SKF:7320 BECBM /	2013-05-24	<u>SABIC</u>
<u>MANUFACTURER REFERENCE</u>	SKF:7320 BEC BM/DB/C3 /	2013-05-24	<u>SABIC</u>
<u>MANUFACTURER REFERENCE</u>	EBARA CORPORATION:UNKNOWN /	2013-05-24	<u>SABIC</u>
<u>BUYER REFERENCE</u>	SWCC:0095700	2013-05-24	SWCC
<u>BUYER REFERENCE</u>	SABIC:444704	2013-05-24	SABIC
<u>BUYER REFERENCE</u>	SABIC:586195	2013-05-24	SABIC
<u>STANDARD REFERENCE NUMBER</u>	ISO R 15-PART 1 /	2013-05-24	<u>SWCC</u>

Companies that have a common interest in cataloging and ISO 8000 quality master data!



Our future



Thank You



Questions?