

# Pin Point Today ...

# Pin Point Tomorrow

Briefing to PSMC

XSB

30 October 2012



# Today's Agenda

## Quick Review of Pin Point Today

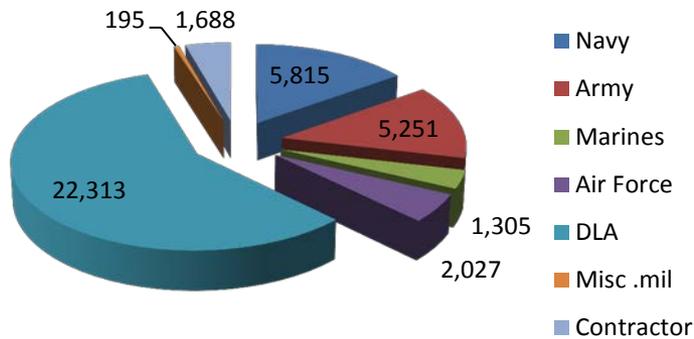
- Usage Status
- Potential Updates
- The Addition of SMART
- A Vision for the Pin Point of Tomorrow
  - The Larger Problem
  - Linked Data Model
  - Looking Forward



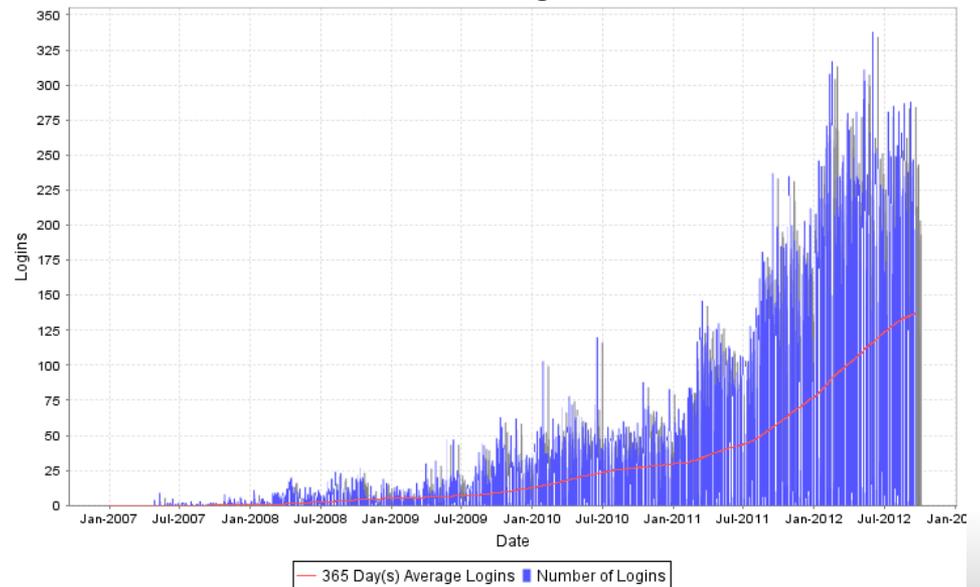
# Pin Point

- There has been sharp growth curve of usage by DLA and its customers, there are hundreds of log-ins each day.
- Users continue to submit enthusiastic testimonials on the value of the system.

## 2012 Pin Point Logins



## Number of Logins



# Domains Enhanced by DLA & Other Customers

- ADAPTER,CONNECTOR
- AIR CLEANER,INTAKE
- BEARING UNIT,BALL
- BEARING,BALL,ANNULAR
- BEARING,ROLLER,NEEDLE
- BODY,VALVE
- BOX CONNECTOR,ELECTRICAL
- CABLE,SPECIAL PURPOSE,ELECTRICAL
- CAPACITOR,FIXED,CERAMIC DIELECTRIC
- CAPACITOR,FIXED,ELECTROLYTIC
- CAPACITOR,FIXED,PLASTIC DIELECTRIC
- CIRCUIT BREAKER
- CLAMP,LOOP
- CONNECTOR BODY,PLUG,ELECTRICAL
- CONNECTOR BODY,RECEPTACLE,ELECTRICAL
- CONNECTOR,PLUG,ELECTRICAL
- CONNECTOR,RECEPTACLE,ELECTRICAL
- COOLER,LUBRICATING OIL,ENGINE
- FILTER ELEMENT,FLUID
- FILTER ELEMENT,INTAKE AIR CLEANER
- FUSE,CARTRIDGE
- FUSE,INCLOSED LINK
- FUSEHOLDERS
- GASKET
- HOSE ASSEMBLY,NONMETALLIC
- KNOB
- MICROCIRCUITS
- MOTOR,HYDRAULIC
- NIPPLE,PIPE
- NUT,PLAIN,BLIND RIVET
- NUT,SELF-LOCKING,HEXAGON
- O-RING
- PACKING
- PIN,STRAIGHT,HEADLESS
- PROPELLER SHAFT,VEHICULAR
- RELAY,ELECTROMAGNETIC
- RELAY,SOLID STATE
- RETAINER,FUSE
- RETAINER,PACKING
- RIVET,SOLID
- SCREWS
- SEALS
- SEAT,VALVE
- SEMICONDUCTOR DEVICE,DIODE
- SETSCREW
- SHAFT,AXLE,AUTOMOTIVE
- SOCKET,PLUG-IN ELECTRONIC COMPONENTS
- SPLICE,CONDUCTOR
- SPROCKET WHEEL
- STARTER,MOTOR
- STEM,FLUID VALVE
- STEM,NEEDLE VALVE
- SWITCH,SENSITIVE
- TERMINAL,LUG
- TERMINAL,QUICK DISCONNECT
- TRANSISTOR
- VALVE ASSEMBLY
- VALVES
- WASHER,FLAT
- WIRE,ELECTRICAL
- YOKE,UNIVERSAL JOINT,VEHICULAR

## Coming soon:

DRIVE SHAFT ASSEMBLY,CONSTANT VELOCITY,VEHICULAR  
FILTER,FLUID  
PROPELLER SHAFT WITH UNIVERSAL JOINT,VEHICULAR  
PUMP UNIT,ROTARY  
PUMP,COOLING SYSTEM,ENGINE  
PUMP,FUEL,ELECTRICAL  
PUMP,RADIAL PISTONS  
PUMP,RECIPROCATING  
PUMP,ROTARY  
PURIFIER,CENTRIFUGAL,OIL  
SEPARATOR,WATER,LIQUID FUEL  
RESISTORS



# Potential Updates for Pin Point

- Improved Search and Analysis
- Expanded Domain Knowledge
  - More Frequent Data Refresh
  - Restore Missing Data
- More modern infrastructure



# Improved Search and Analysis

**Department**  
< Any Department  
< Industrial & Scientific  
< Fasteners  
< Screws  
**Wood Screws**

---

**Material**  
**Any Material Type**  
Metals & Alloys (561)

---

**System of Measurement**  
**Any System of Measurement**  
English (239)  
Inch (561)

---

**Drive Style**  
**Any Drive Style**  
Phillips (362)  
Slotted (175)  
Square (24)

---

**Head Style**  
**Any Head Style**  
Flat (338)  
Oval (48)  
Round (175)

---

**Size**  
**Any Size**  
#10 (100)

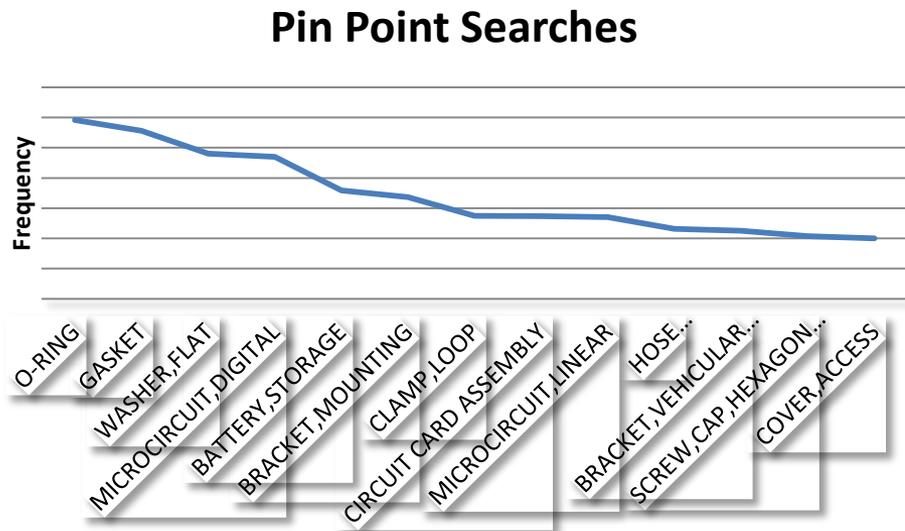
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**Seller**  
 Fastener SuperStore, Inc. (367)  
 Deerso (220)  
 acehardwareoutlet (195)  
 MetalGrip Fasteners (193)  
 BIC Superstore (141)  
 Geroy's (135)

- Users are accustomed to more modern search modalities commonly found in eCommerce Web sites.
- Provide a Amazon-like interface
  - Intuitive Searching
- Immediate Feedback of Result Count
  - Faster Feedback
- Prevents Complex Queries With No Indication of No Results
  - Minimize User Frustration
- Multiple Selection Capability
  - Flexible Searching
- Apply/Remove Filter Capability
- Numeric Range Filters
  - Prices, Lead Time, etc..



# Expanded Domain Knowledge



- Analyze searches to expand domain knowledge based upon what people are looking for
- 64% of survey respondents use Pin Point for Material Search; expand, strategic and regulated materials
- Develop automated systems to lower the cost of sustaining and refreshing data harvested from the Web



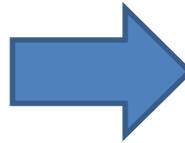
# Infrastructure Improvements

- Scalability & Clustering
  - Elimination of downtime for maintenance
    - Server Security Patches (52 times/year)
    - Website deployments
  - Clustering provides website
    - Availability
      - Multiple servers provide this functionality
    - Sustainability
      - Maintenance of a server or hardware failure
    - Scalability
      - Balancing server load



# What is SMART?

NSN: 5935-00-242-5283  
ITEM NAME: CONNECTOR,PLUG,ELECTRICAL  
Part Number : P-304-CCT  
Mfr: Cinch Connectors



Data found on web



Specifications Documents My Notes

Manufacturer:	Cinch	<input checked="" type="checkbox"/>
Product Category:	Jones Plugs & Sockets	<input checked="" type="checkbox"/>
RoHS:	No	<input type="checkbox"/>
	RoHS Version Available	
Contact Material:	Brass	
Contact Plating:	Cadmium	
Housing Material:	Thermoplastic	
Number of Positions / Contacts:	4	
Voltage Rating:	250 V	

[Add to Compare List](#) [Show Similar](#)

Show Stocked Products With Similar Attributes. Found: 28

Show stocked product(s), check and uncheck the boxes above. Per above selection(s)

- The Strategic Materials Assessment and Response Tool (SMART) collects materials and compliance data from a variety of sources and makes the information available via Pin Point
- Evolving regulations can disrupt supply chain. We are applying advanced data mining techniques to government and commercial data to enable a proactive response to a dynamic regulatory environment.



## Strategic Material Assessment and Response Tool

[Create NSN Batch](#) | [Manage NSN Batches](#) | [Create Part Number Batch](#) | [Manage Part Number Batches](#) | [Material Search](#)

User Batch:

- or -

WSDC:

- or -

NSN:

NSN Search box

### Material Lists

REACH  RoHS  EPA  DoD

[Privacy Statement](#) [Terms of Use](#) [508 Compliance](#) [Feedback](#) [Plug-ins](#)



# NSN Search result

User Batch:

- or -

WSDC:

- or -

NSN:

---

Material Lists    REACH     RoHS     EPA     DoD

Recently-added SVHC, Mfr claims REACH compliance (with reason)

Results 1 - 1 of 1  
SMART Material Data

[Download](#)  
[Print](#)

Product ID	Company Name	NSN	Status Code	Material	CAS Number	% Weight	Reach	RoHS	EPA Priority List	DoD Emerging Contaminants
1N458A	Fairchild Semiconductor	5961-00-068-9142 [WSIT]	1	Boric oxide	1303-86-2	0.4823	yes	no	no	no

Results 1 - 1 of 1  
SMART Regulatory Data

[Download](#)  
[Print](#)

Product ID	Company Name	NSN	Regulation	Compliance
1N458A	Fairchild Semiconductor	5961-00-068-9142 [WSIT]	Reach	yes



# Strategic Material Assessment and Response Tool

[Create NSN Batch](#) | [Manage NSN Batches](#) | [Create Part Number Batch](#) | [Manage Part Number Batches](#) | [Material Search](#)

User Batch:    
 - or -   
 WSDC:    
 - or -   
 NSN:    
 Material Lists: REACH

### Context Information

## SMART Material Context

This information was collected from a manufacturer MSDS document dated 12/01/2006.

[Link to MSDS document](#)

Results 1 - 1 of 1  
SMART Material Data

Product ID	Company Name	NSN	Status Code	Material	CAS Number	% Weight	Reach	RoHS	EPA Priority List	DoD Emerging Contaminants	Download	Print
60980005882	3M	8030-01-565-1437 [WSIT]	0	Bisphenol A phthalate	65-08-7	3 - 7	yes	no	no	no		

SMART Regulatory Data  
No Results Found

External context links are periodically validated



## Strategic Material Assessment and Response Tool

Material or CAS Number

- Boric** oxide : 1303-86-2
- Boric** acid : 11113-50-1
- Ortho**boric** acid : 10043-35-3
- Fluoro**boric** acid : 16872-11-0
- Boric** acid, sodium salt : 1333-73-9
- Boric** acid (HBO<sub>2</sub>), potassium salt : 13709-9-
- Ortho**boric** acid diethanolamine salt : 67952-
- Ortho**boric** acid isopropanolamine salt : 2603
- Ortho**boric** acid diethanolamine salt (1:1) : 6
- Boric** acid (H4B6O11) zinc salt (1:2) hydrate

[Privacy Statement](#) [Terms](#) [Back](#) [Plug-ins](#)

Autocomplete works for both material name and CAS number input



## Strategic Material Assessment and Response Tool

Material or CAS Number

[Back to main SMART page](#)

Results 1 - 50 of 948

Material Data for "Boric oxide" (On list: REACH)

[Download](#)

[Print](#)

Product ID	Company	Material	CAS	RoHS	REACH	DoD	EPA	% Weight
#14107 BUFFER PILLOWS PH 9.00	H							
123 0689 MICRODOL-X DEVELOPER	E							
123 0895 D-76 DEVELOPER (AFTER OCT85)	EASTMAN KODAK COMPANY	Boric oxide	1303-86-2					
123 0895 DEVELOPER D-76, CONCENTRATE	EASTMAN KODAK COMPANY	Boric oxide	1303-86-2					
123 0895 DEVELOPER D-76,KAN 440508,CONCENTRATE	EASTMAN KODAK COMPANY	Boric oxide	1303-86-2					
123 4699 FIXER	EASTMAN KODAK CO.	Boric oxide	1303-86-2					
123 4699 KODAK FIXER, CONCENTRATE	EASTMAN KODAK COMPANY	Boric oxide	1303-86-2					
146 3975 KODAK LINAGRAPH FIXER	EASTMAN KODAK COMPANY	6750-00-619-9945 [WSIT]	0					
146 4668 EKTONOL DEVELOPER,PART A	EASTMAN KODAK COMPANY	Boric oxide	1303-86-2					
146 4668 KODAK EKTONOL DEVELOPER, PART A	EASTMAN KODAK COMPANY	Boric oxide	1303-86-2					
146 4791 DEVELOPER D-76, CONCENTRATE	EASTMAN KODAK CO	Boric oxide	1303-86-2					
146 4791 DEVELOPER D-76,C-0027.100,CONCENTRATE	EASTMAN KODAK COMPANY	Boric oxide	1303-86-2					
146 4809 D-76 DEVELOPER CONCENTRATE	EASTMAN KODAK COMPANY	Boric oxide	1303-86-2					
146 4809 DEVELOPER D-76, CONCENTRATE	EASTMAN KODAK CO	Boric oxide	1303-86-2					
146 4809 DEVELOPER D-76,C-0027.100,CONCENTRATE	EASTMAN KODAK COMPANY	Boric oxide	1303-86-2					

If material is on REACH, RoHS, DoD, or EPA lists, this is indicated in results header



# Today's Agenda

- Quick Review of Pin Point Today
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## A Vision for the Pin Point of Tomorrow

- The Larger Problem
- Linked Data Model
- Looking Forward



# The Larger Data Issue

- Data is often:
  - Incomplete
  - Inconsistent
  - Inaccurate
  - Out of Date
  - Not relational
- With sharing issues:
  - Secret
  - Closed systems
  - Paper based
  - Not machine readable
  - Not standardized

This is a pervasive condition across government, industries and domains.



# What is Desired?

- High quality data that is:
  - Ubiquitous
  - Automated
  - Standardized
- So that it is:
  - Relational
  - Linked
  - Interoperable
- For people and machines to be shared across the enterprise, its customers and suppliers

## Requiring Change In:

- Organizations
- Processes
- Technologies



# Consistent with PSMC Objectives

- The PSMC offers a standing forum for DoD and industry communication and collaboration to promote and enable effective parts management in support of the war fighter.
- We achieve this by:
  - promoting the benefits of parts management,
  - reducing life-cycle costs by promoting part and process commonality,
  - advocating commercial and industrial part standardization,
  - promoting parts management education and training,
  - developing parts management tools,
  - assisting in developing cost-effective parts management programs, and
  - mitigating the impact of obsolescence.

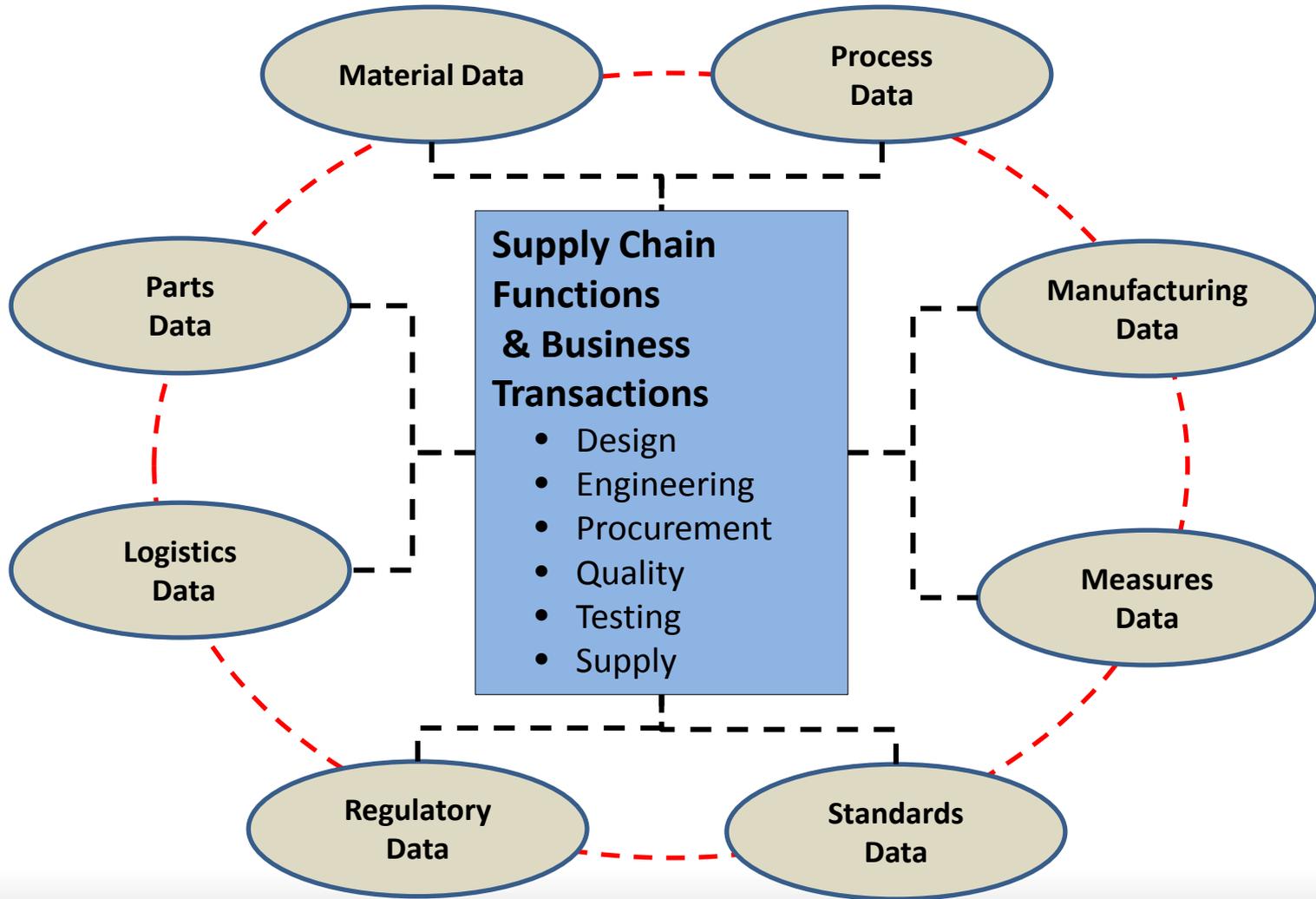


# The Linked Data Model

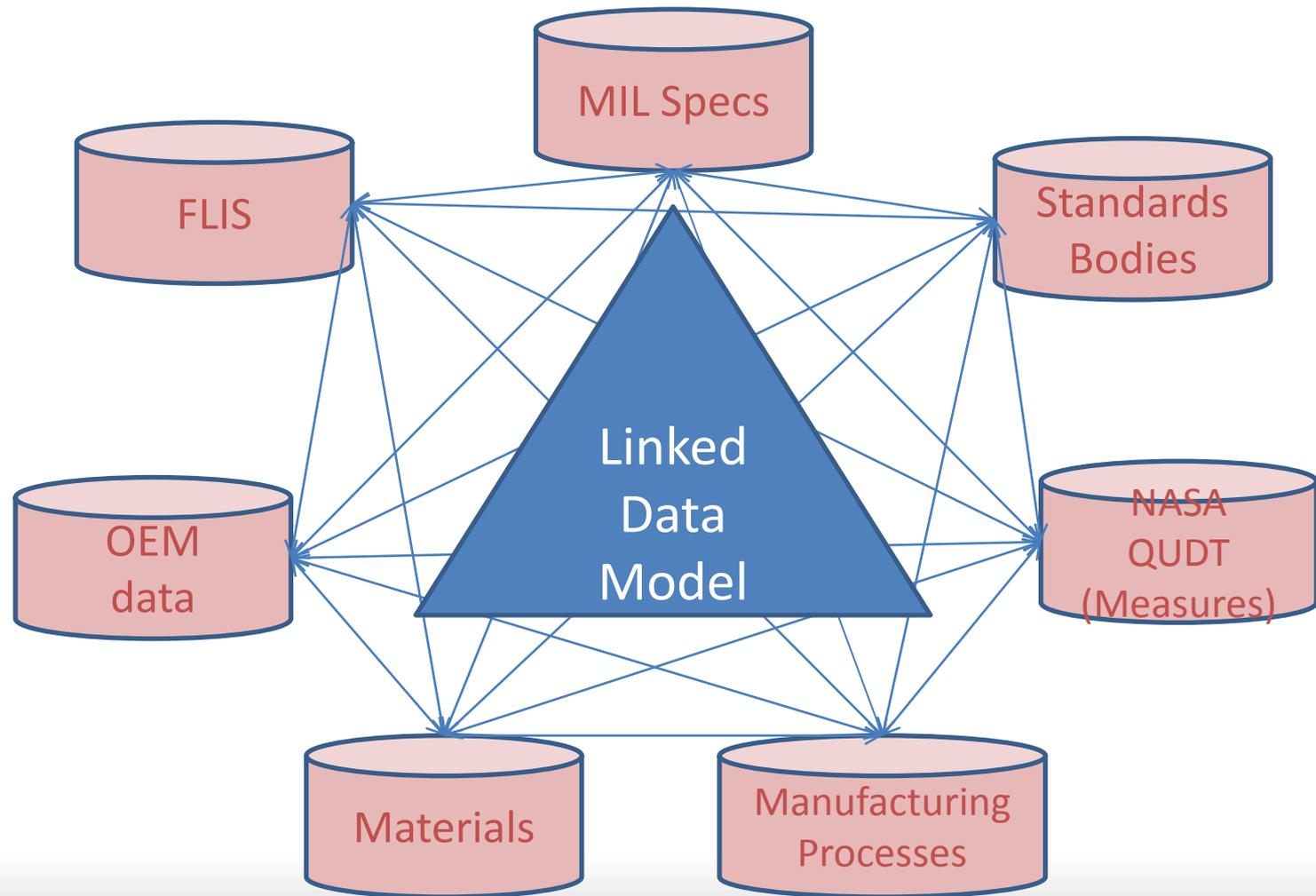
- Part Requirements that are more closely coupled to linked concepts and deliver to suppliers the precise information they need in a timely and interoperable format.
- Part Data can be distributed using a new technical and logistics models optimized for the semantics of different types of DLA customers: Design, Quality, Procurement, Maintenance....
- These user specific views can be integrated with the enterprise and delivered wirelessly to the point and time of use.
- Expanded interoperability and closer integration between OEMs, Standards Bodies and the DOD.



Today, this kind of data is independently searched in separate systems.  
Pin Point provides a loose coupling across sources today



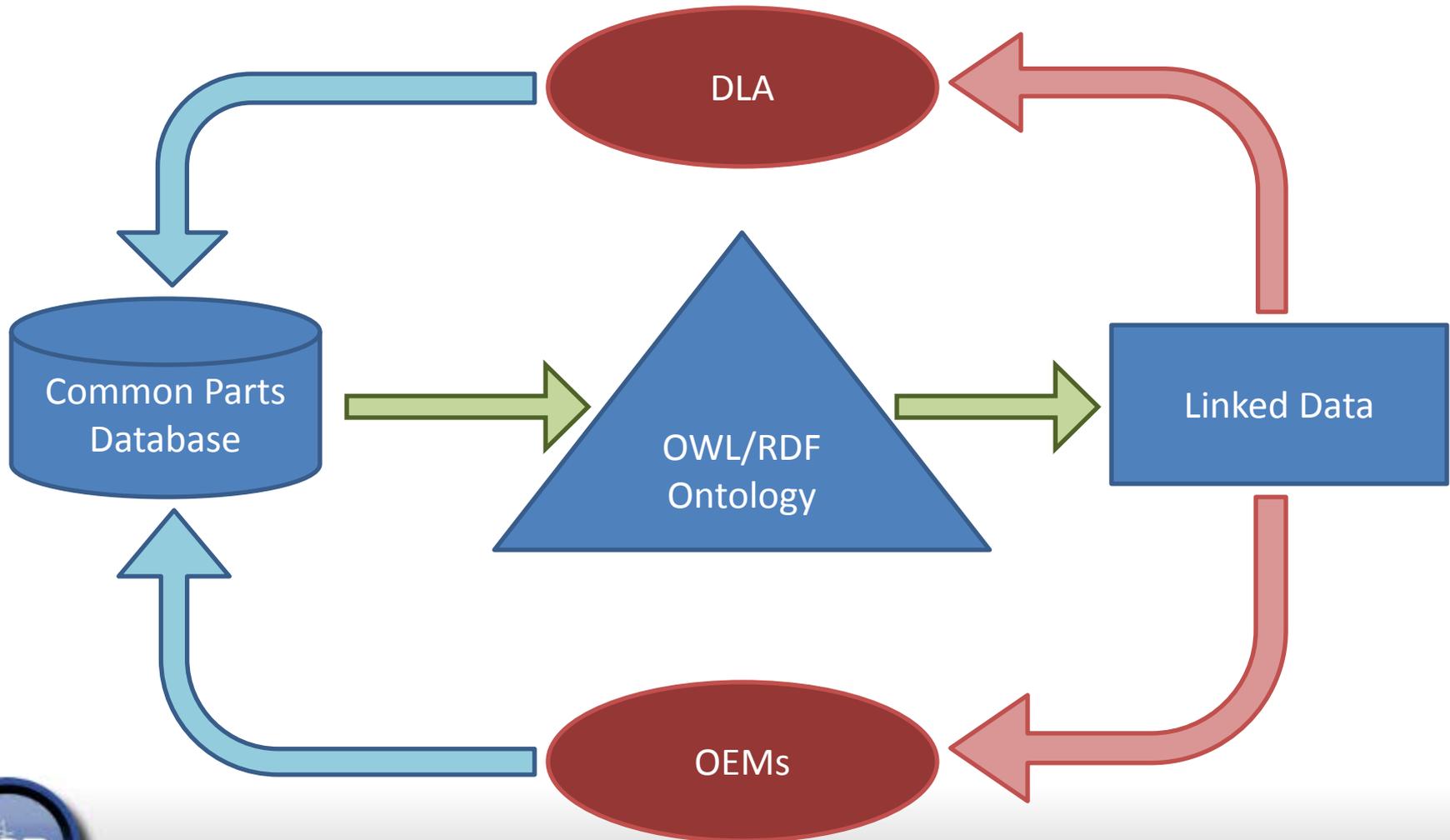
What if these sources were more tightly coupled into a linked data model that enabled interoperability across the DLA Enterprise, its customers and suppliers?





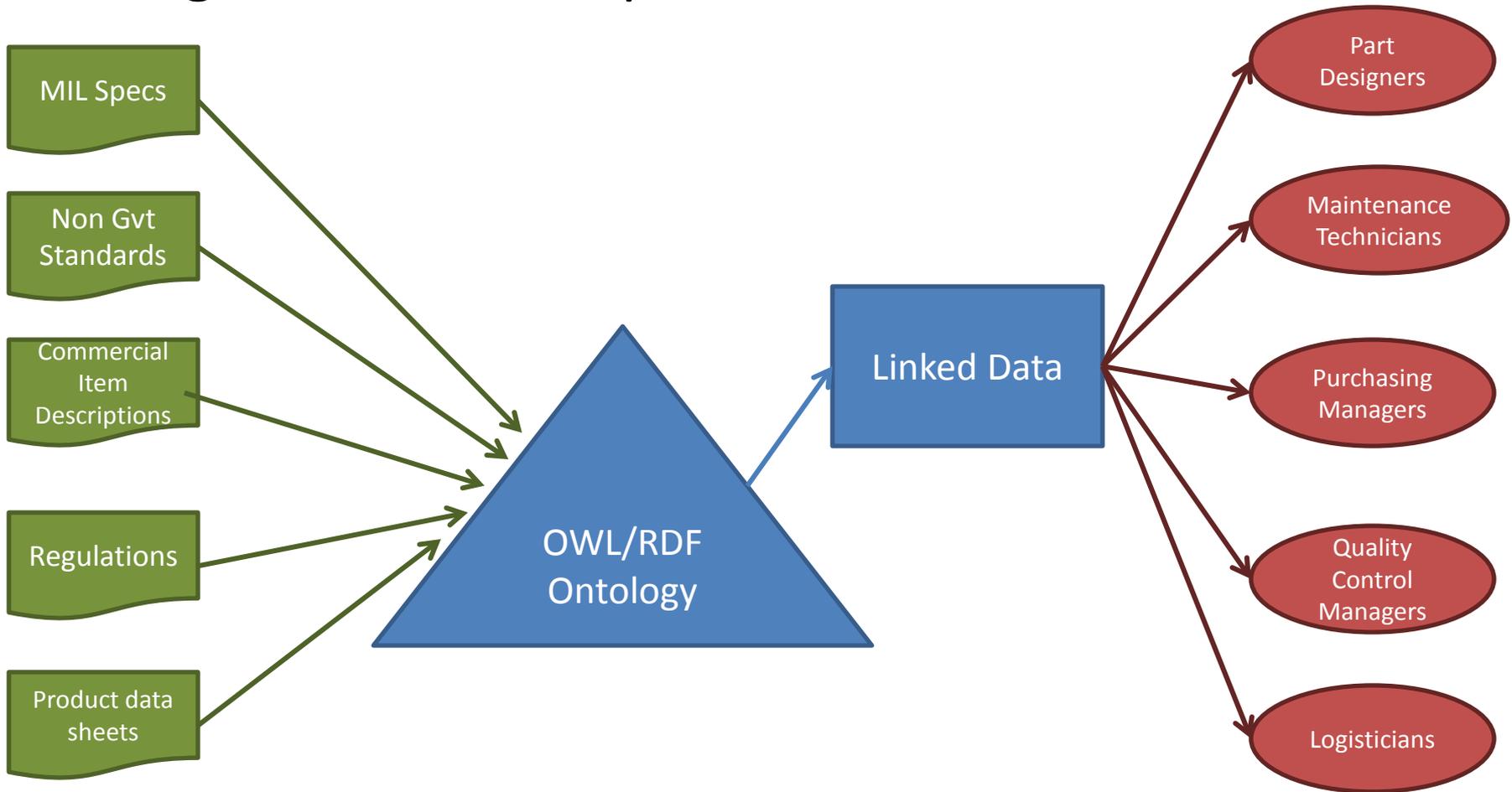
# Steps Towards Linked Data

## Part Management and Selection



# Steps Towards Linked Data

## Digital Models of Specifications and Standards



# Looking Forward

- Pin Point today is a portal or library
- Pin Point in the future may be part of the Semantic Web infrastructure: ubiquitous, persistent
- Not a provider of content but a platform to foment the ideas that content engenders
- Better serving the war fighter by providing access to the network and insight derived from the network



# What Makes This Possible

## 1. The Economics of Sharing:

- New, Semantic Web Linked Data formats make it easier to package data into small chunks that humans and machines can access, share and reuse.

## 2. The Economics of Deletion:

- It is now cheaper to keep things than to throw them out, There is a lot more stuff: what is valuable and what is junk? Data that was not worth storing may have new potential value.

## 3. Computers have grown exponentially smarter and cheaper:

- We humans can not understand the complexity of all we can assemble;
- BUT, using technology like XSB, we can create digital models to assemble all the pieces so that we can discern the universal trends from all the detailed particulars.

## 4. The Demands of the Supply Chain

- Supply chain customers and suppliers desire better data for their business transactions – design, supply, maintenance, procurement, quality testing and more.



# In the end, we achieve these Benefits\*

- Parts management focuses on part selection during weapon system design, part application, obsolescence mitigation, and standardization. The benefits include:
  - reduced system life-cycle costs,
  - enhanced system supportability,
  - improved quality and reliability,
  - improved readiness,
  - better interoperability,
  - reduced logistics footprint,
  - lower documentation costs,
  - decreased part and supplier qualifications,
  - reduced inventory costs, and
  - enhanced economy of scale through larger volume buys.

