

Headquarters U.S. Air Force

Integrity - Service - Excellence

Air Force Total Ownership Cost Decision Support System (AFTOC)



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Team Leader
27 Sept 2004**

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Statement of Need

(Washington Speak)



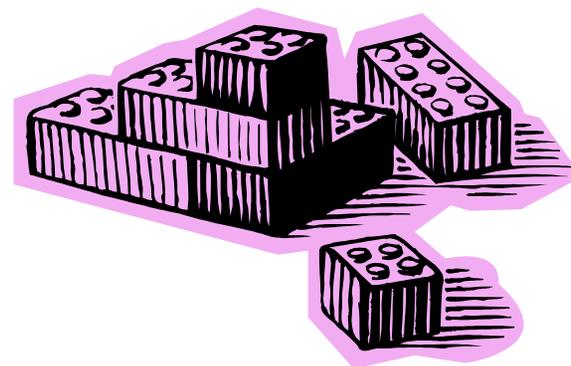
- **AFTOC is designed to significantly reduce the need for analysts and DoD staff to acquire, normalize, aggregate, allocate, and organize financial and logistic data on AF systems and infrastructure and to provide analytical capability that would otherwise not exist.**



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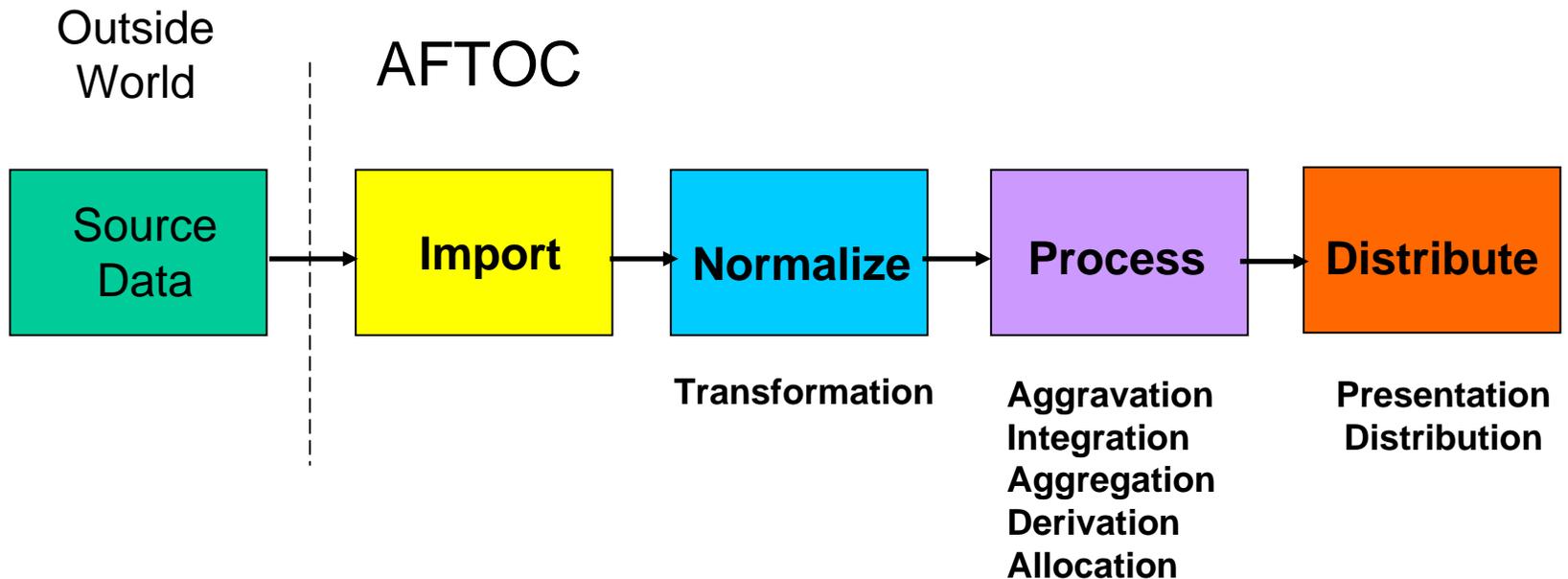
The Eight “tions” of AFTOC

- *Transformation*
- *Aggravation*
- *Integration*
- *Aggregation*
- *Derivation*
- *Allocation*
- *Presentation*
- *Distribution*





Simplified Flow Diagram





Transformation

- Each data feed has its own unique structure that must be “normalized” before it can be used
 - Text numbers turned into real numbers
 - Codes deciphered
 - Translate labels into common terminology
 - Standardize naming conventions, dates, places



Transformation of Data

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Supply Data as Received

48522004182015587Y2840014484901NZJ707JS41770085000001RME721060XA
E231CXD20156898890644DOR1PU78210057CTM700007720352R121C0

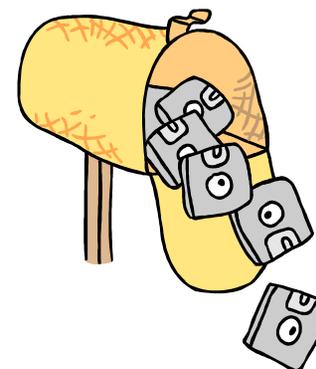
Posted to the Logistics Distribution Table (a subset of the fields available)

Data_Source	Data_Type	SRAN	Org	OBAN	Command_CAIG	RCCC
D40	MSD	4852	707	7821	ACC	352R12
Unit	Base	PFMR	DocNo	SRD	SRD_Descr	
HQ/57th WG	NELLIS AFB (NV)	720	J707JS41770085	XAE	F100PW229B	
FSC	NIIN	MMAC	Noun	TransDate		
<u>TransSerialNo</u>						
2840	014484901	NZ	HOT SECTION MODULE,AIRCRAFT		2004182	01558
LA_Price	Standard_Price	Markup_Price	Carcass_Price			
<u>Exchange_Price</u>						
\$1,734,000.00	\$2,444,704.50	\$875,715.60	\$894,845.24			
\$1,568,988.90						
MD_CAIG	Engine_TMS	Output_TRIC	Input_TRIC	TTPC	Phrase	Net_Qty
<u>Net_Cost</u>						
F-16C/D	F100PW229B	1PU	DOR	7Y	CHARGE @ XCH	1
\$1,568,988.90						
Shop_Code	Work_Unit_Code	Work_Unit_Code_Description				
JS	23	Turbojet/Turbofan Propulsion System				



Aggravation with Data

- **Data is often incomplete or in error**
 - **Processes are in place to**
 - **Identify what's missing or wrong**
 - No data where some is expected
 - Wrong kind of data
 - Applying statistics
 - Checking outliers
 - **Make things right**
 - Filling in the holes
 - Related transactions
 - Use other data (e.g., basing) to narrow possibilities
 - User input
 - **Changing data sources**
 - **Changing Air Force structure**

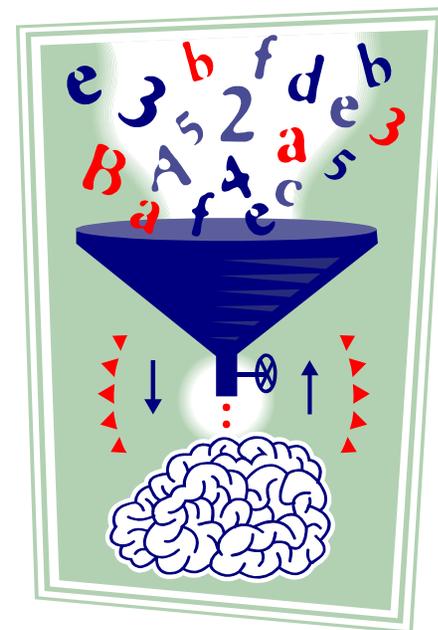




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Integration of Data

- AFTOC ties data from different data sources together
 - Data warehouse architecture
 - Cross-reference tables
 - Business rules
 - Assign cost to systems or places
 - Tables
 - Cubes





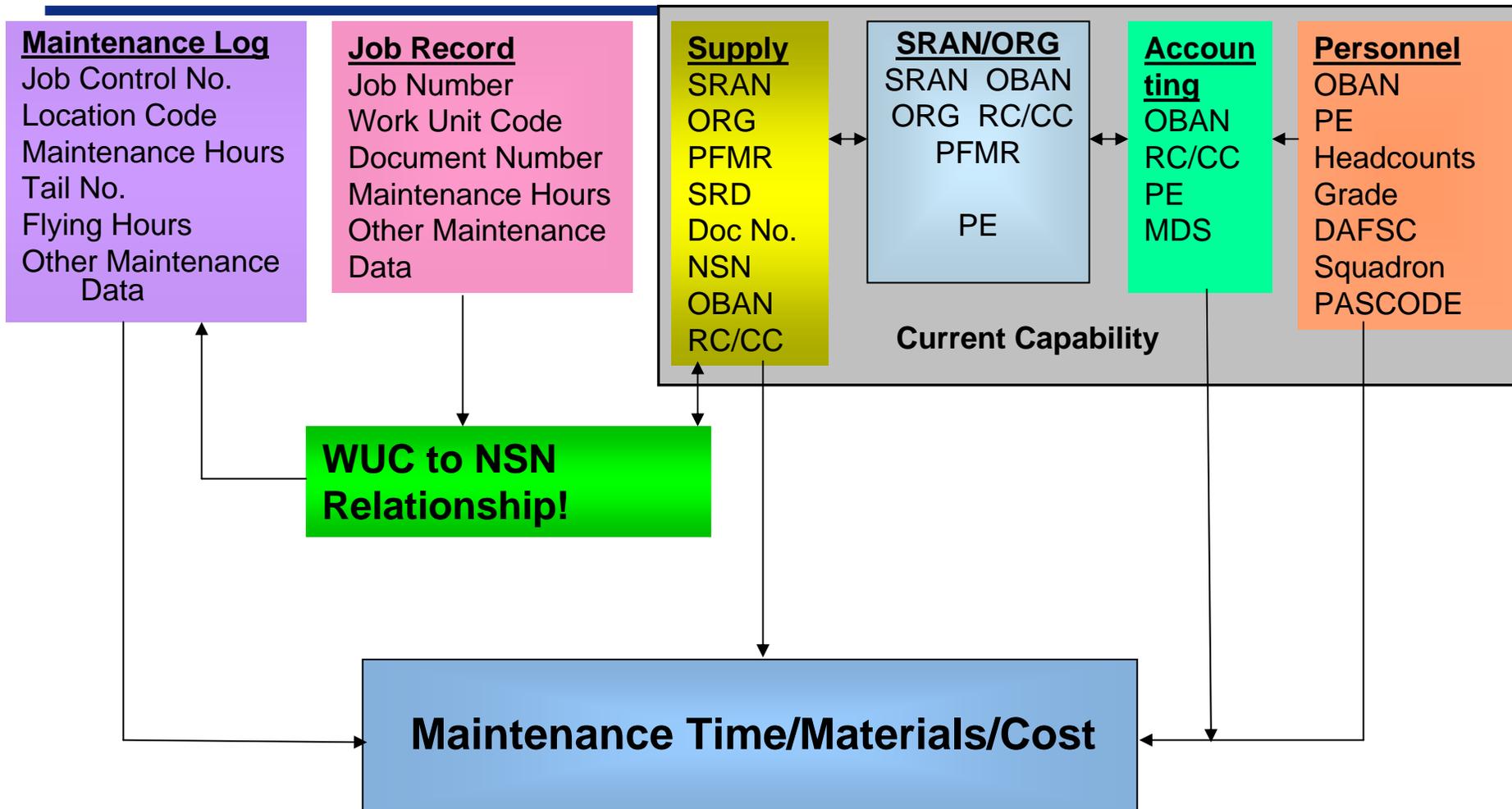
Derivation of Data

- AFTOC added value = *derived data*
- **Functional knowledge** + **Multiple data elements**
+ **Cross reference tables** = **Derived data**
- **Example 1:**
 - **MAJCOM+UNIT+BASE+PEC+SHOP CODE=AIRCRAFT TYPE**
- **Example 2:**
 - **supply transaction record incomplete, fill in based upon historical transaction records**



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Aggregation of Data



Using multiple disparate data elements to derive new information



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Allocation of Data

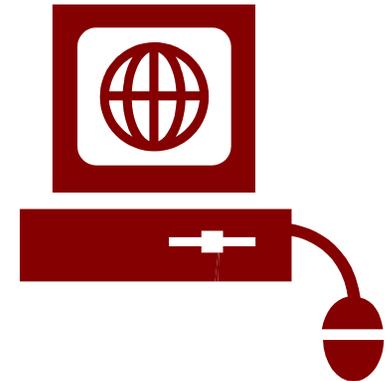
- No matter how hard we try, some allocation of costs is needed
 - Differentiating between F-15C and F-15D at a base
 - Assigning costs to partial Contractor Logistics Supported aircraft in a shared Program Element Code

- Using measures as “allocators”
 - Usage rate, flying hours
 - Location
 - Inventory
 - Fuel usage
 - Historical statistics





- **Predefined Formats**
 - **Static Web Pages**
 - **Multi-Metric Briefing Book**
- **User Defined Formats**
 - **COGNOS Portal**
 - **Drill down**
- **OLAP – On Line Analytical Processing**
 - **Queries of multi-dimensional data cubes**
 - **Deep drill down**
- **Tools**
 - **Logistics Distribution Tool**
 - **Cost Per Flying Hour Tool**





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Distribution

- **AFTOC is web based information**
- **Access restricted to authorized persons**
 - **Government employees**
 - **Contractors with Government sponsorship**
 - **On line registration**
- <https://AFTOC.hill.af.mil>
- **Help Desk**
 - **User Requests**
 - **User Support**





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The Magic Has Happened



The data is now information!