Headquarters U.S. Air Force

Integrity - Service - Excellence

Standardization Program Update

Requirements and References Decision Database
and a
Glimpse into the Future

Mr. Edward Durell, P.E.
Air Force Departmental Standardization Office

28-October-2015

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abstract: 17816

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Today's Topics

- **Standardization documents tool for use by Program Offices**
  - ***Requirements and References Decision Database* (aka *R2D2*)**
- **Concept of meta-policy and policy-bots**

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Standardization Documents

- Examples: standards, specifications, handbooks
  - Could be military, commercial or other federal agency; examples…
    - MIL-STD-1530, Aircraft Structural Integrity Program (ASIP)
    - MIL-PRF-32058, Chock, Wheel-Track - Aviation, Adjustable Rope Type
    - MIL-HDBK-896, Manufacturing and Quality Program
    - SAE-AS6174, Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel
    - TSO-C123a, Cockpit Voice Recorder System
  - Use of standardization documents, including MIL-STDs, are voluntary
    - Unless mandated in law or policy

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Standardization Tool-R2D2 at-a-glance

- R2D2 = "*Requirements and References Decision Database*"
- Output -> List of standardization documents (MIL-STDs and industry standards) that can be placed on contract
  - Some mandated by AF policy; which can be ascertained using R2D2
  - Also yields useful documents, not intended to be placed on contract, but may be helpful for working level engineers
  - Documents in output are systems engineering-centric

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Goal:

- Help program managers ascertain which standardization documents they should:
-- place on contract; and/or
-- use internally

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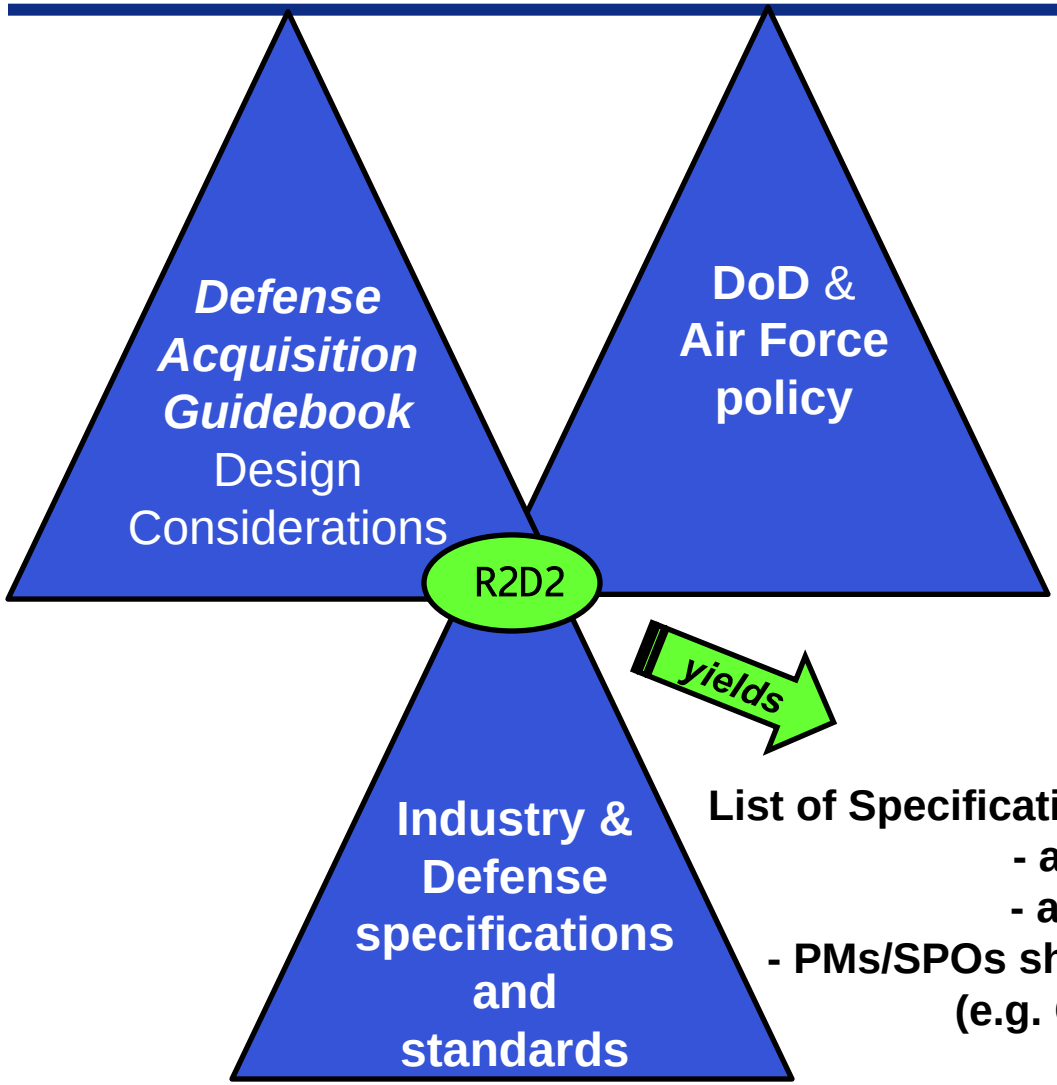
R2D2
Pictorial View



List of Specifications, Standards and Handbooks that:
- are mandated in policy
- are referenced in policy
- PMs/SPOs should consider using if appropriate (e.g. Cockpit Voice Recorder)

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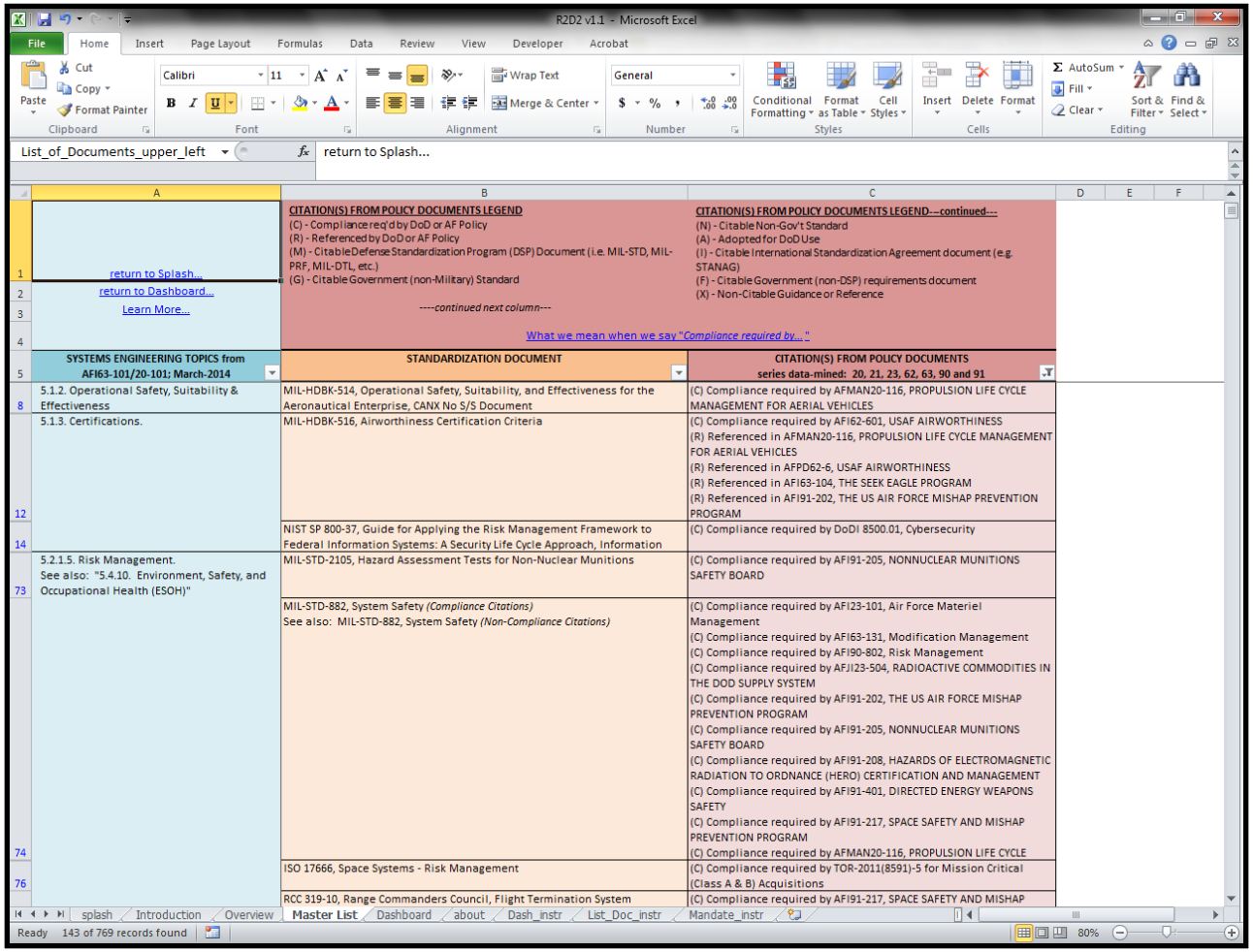
R2D2 Screen capture



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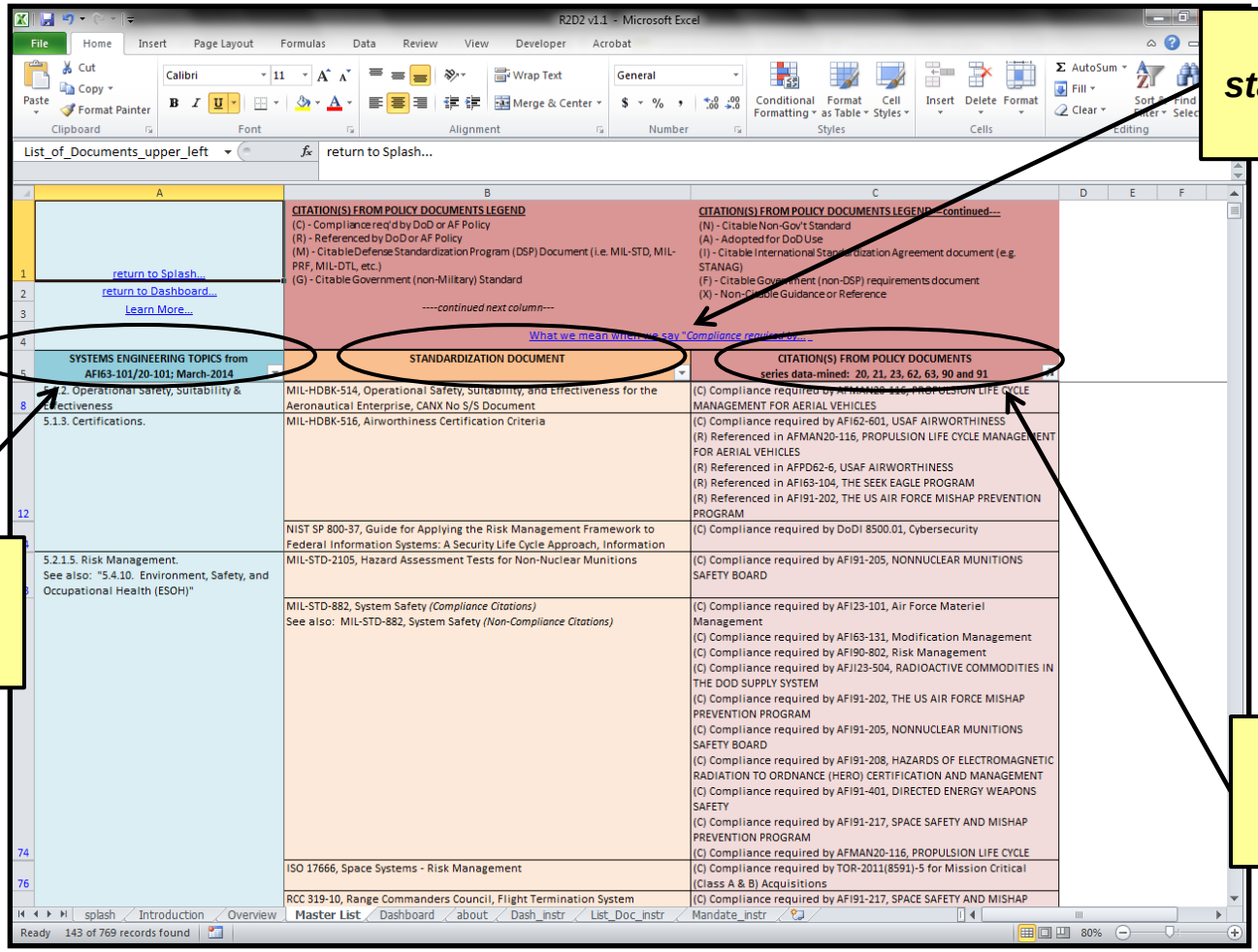
R2D2 Screen capture

Multiple search options

Search by ***standardization document***

Search by ***Design Consideration***

Search by ***Policy Document***



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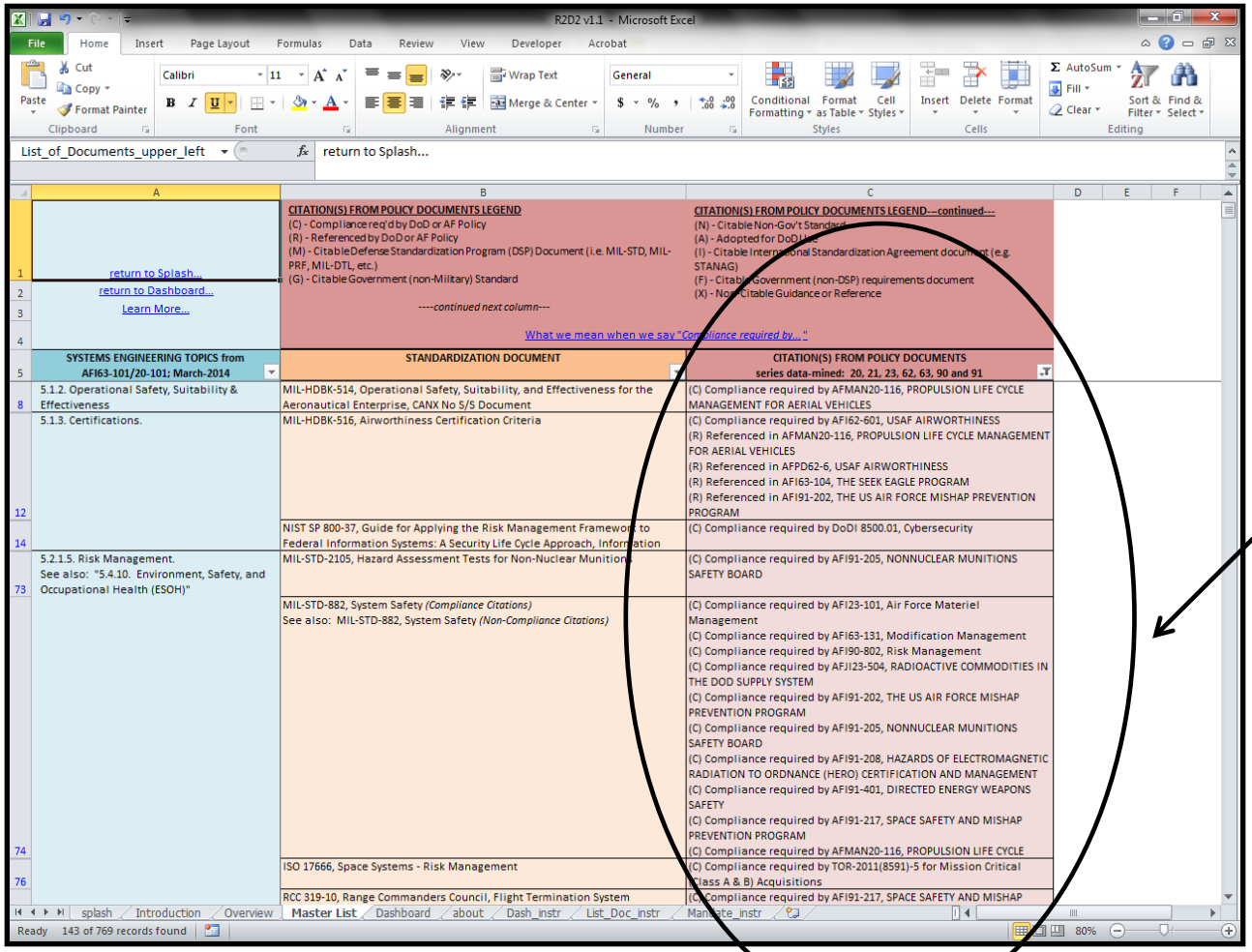
R2D2 Screen capture



Most valuable portion of output

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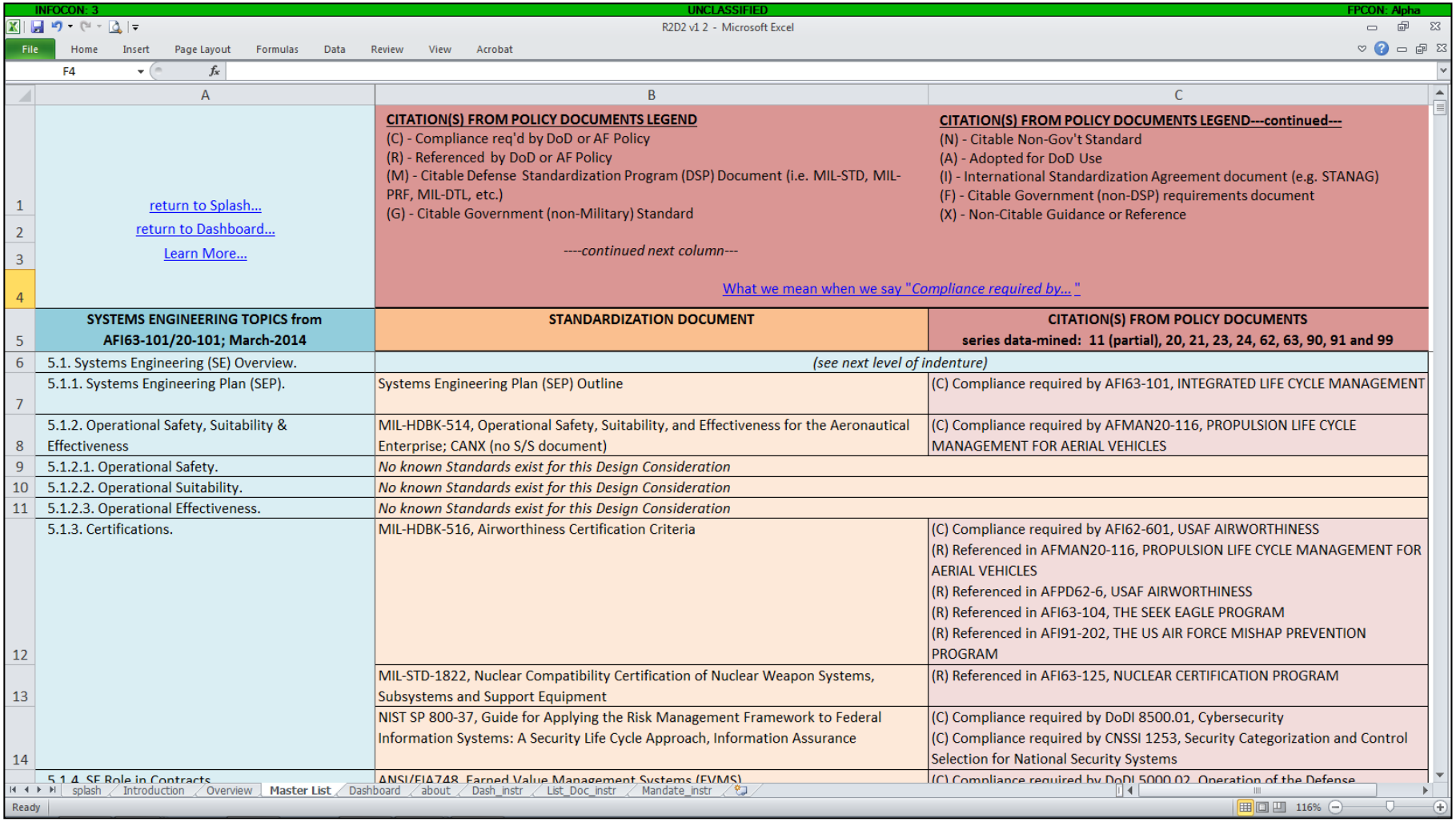
R2D2 Screen Capture



INFOCON: 3 — UNCLASSIFIED — FPCON: Alpha

R2D2 v1 2 - Microsoft Excel

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F4

	A	B	C
1	return to Splash...	**CITATION(S) FROM POLICY DOCUMENTS LEGEND** (C) - Compliance req'd by DoD or AF Policy (R) - Referenced by DoD or AF Policy (M) - Citable Defense Standardization Program (DSP) Document (i.e. MIL-STD, MIL-PRF, MIL-DTL, etc.) (G) - Citable Government (non-Military) Standard	**CITATION(S) FROM POLICY DOCUMENTS LEGEND---continued---** (N) - Citable Non-Gov't Standard (A) - Adopted for DoD Use (I) - International Standardization Agreement document (e.g. STANAG) (F) - Citable Government (non-DSP) requirements document (X) - Non-Citable Guidance or Reference
2	return to Dashboard...		
3	Learn More...	----*continued next column*---	
4		What we mean when we say "*Compliance required by...*"	
5	**SYSTEMS ENGINEERING TOPICS from AFI63-101/20-101; March-2014**	**STANDARDIZATION DOCUMENT**	**CITATION(S) FROM POLICY DOCUMENTS** **series data-mined: 11 (partial), 20, 21, 23, 24, 62, 63, 90, 91 and 99**
6	5.1. Systems Engineering (SE) Overview.	*(see next level of indenture)*	
7	5.1.1. Systems Engineering Plan (SEP).	Systems Engineering Plan (SEP) Outline	(C) Compliance required by AFI63-101, INTEGRATED LIFE CYCLE MANAGEMENT
8	5.1.2. Operational Safety, Suitability & Effectiveness	MIL-HDBK-514, Operational Safety, Suitability, and Effectiveness for the Aeronautical Enterprise; CANX (no S/S document)	(C) Compliance required by AFMAN20-116, PROPULSION LIFE CYCLE MANAGEMENT FOR AERIAL VEHICLES
9	5.1.2.1. Operational Safety.	*No known Standards exist for this Design Consideration*	
10	5.1.2.2. Operational Suitability.	*No known Standards exist for this Design Consideration*	
11	5.1.2.3. Operational Effectiveness.	*No known Standards exist for this Design Consideration*	
12	5.1.3. Certifications.	MIL-HDBK-516, Airworthiness Certification Criteria	(C) Compliance required by AFI62-601, USAF AIRWORTHINESS (R) Referenced in AFMAN20-116, PROPULSION LIFE CYCLE MANAGEMENT FOR AERIAL VEHICLES (R) Referenced in AFPD62-6, USAF AIRWORTHINESS (R) Referenced in AFI63-104, THE SEEK EAGLE PROGRAM (R) Referenced in AFI91-202, THE US AIR FORCE MISHAP PREVENTION PROGRAM
13		MIL-STD-1822, Nuclear Compatibility Certification of Nuclear Weapon Systems, Subsystems and Support Equipment	(R) Referenced in AFI63-125, NUCLEAR CERTIFICATION PROGRAM
14		NIST SP 800-37, Guide for Applying the Risk Management Framework to Federal Information Systems: A Security Life Cycle Approach, Information Assurance	(C) Compliance required by DoDI 8500.01, Cybersecurity (C) Compliance required by CNSSI 1253, Security Categorization and Control Selection for National Security Systems
	5.1.4. SE Role in Contracts	ANSI/EIA748, Earned Value Management Systems (EVMS)	(C) Compliance required by DoDI 5000.02, Operation of the Defense

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Ready — 116%

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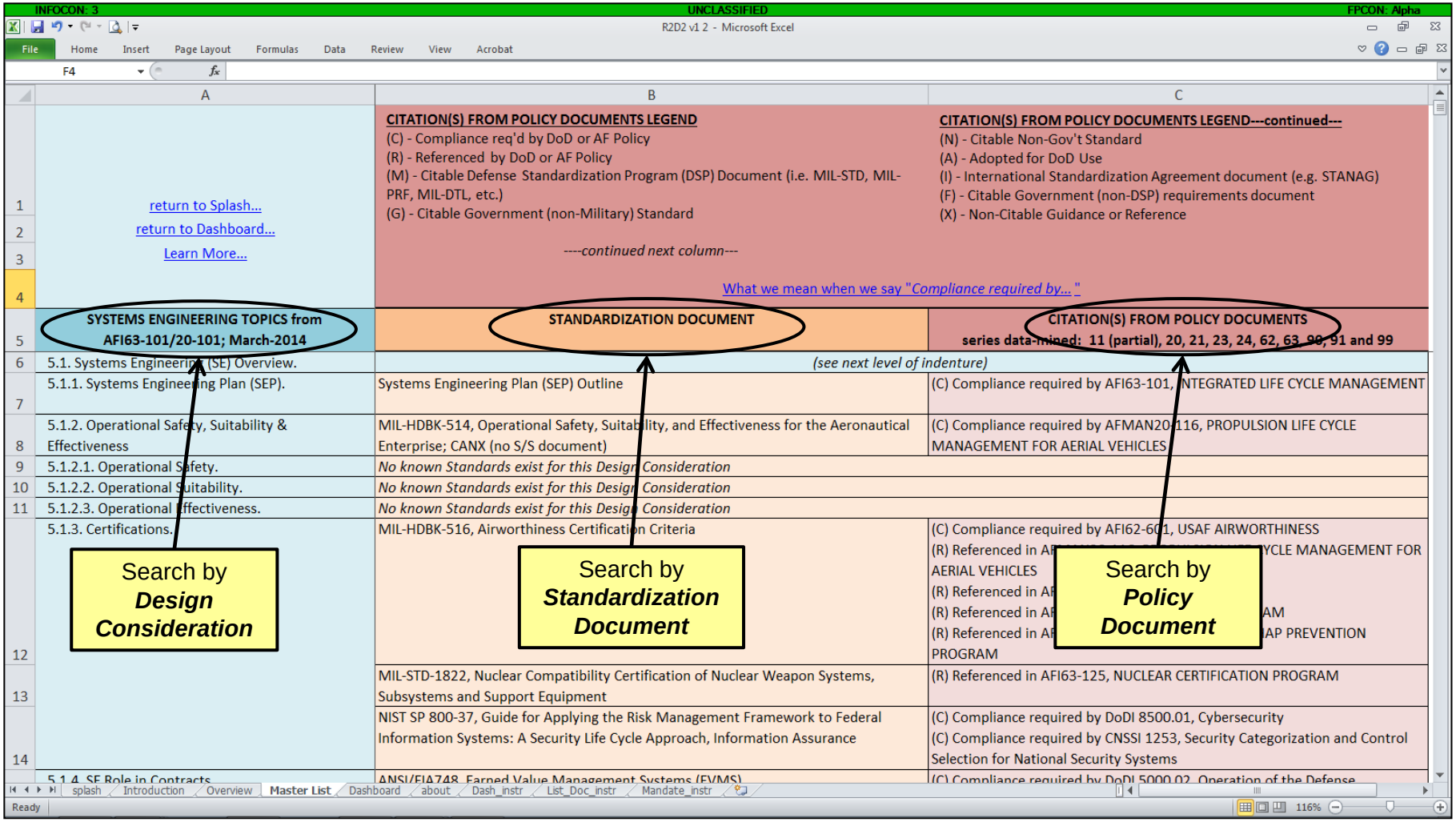
R2D2
Multiple Search Options



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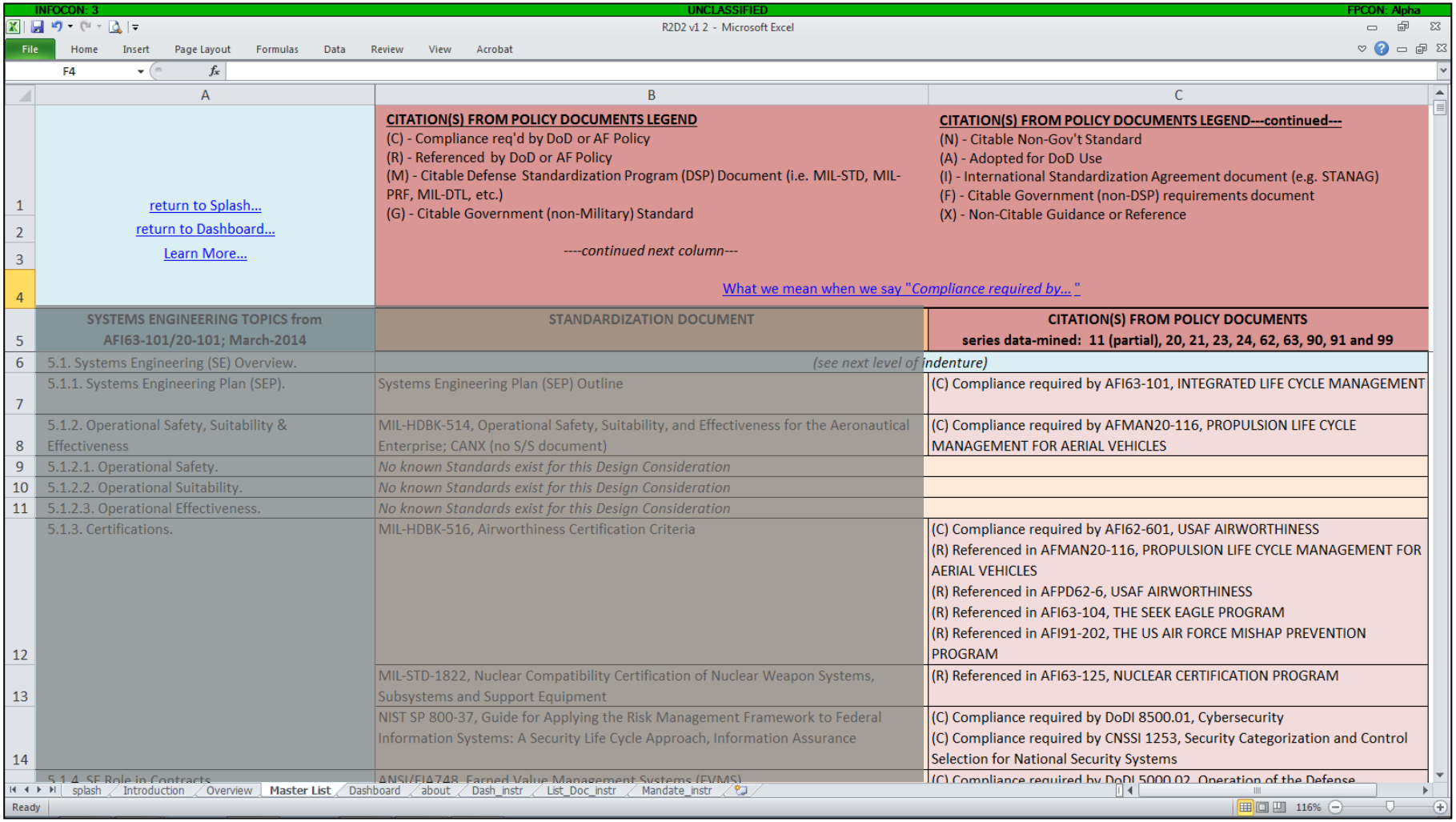
R2D2

Most Valuable Portion of Output



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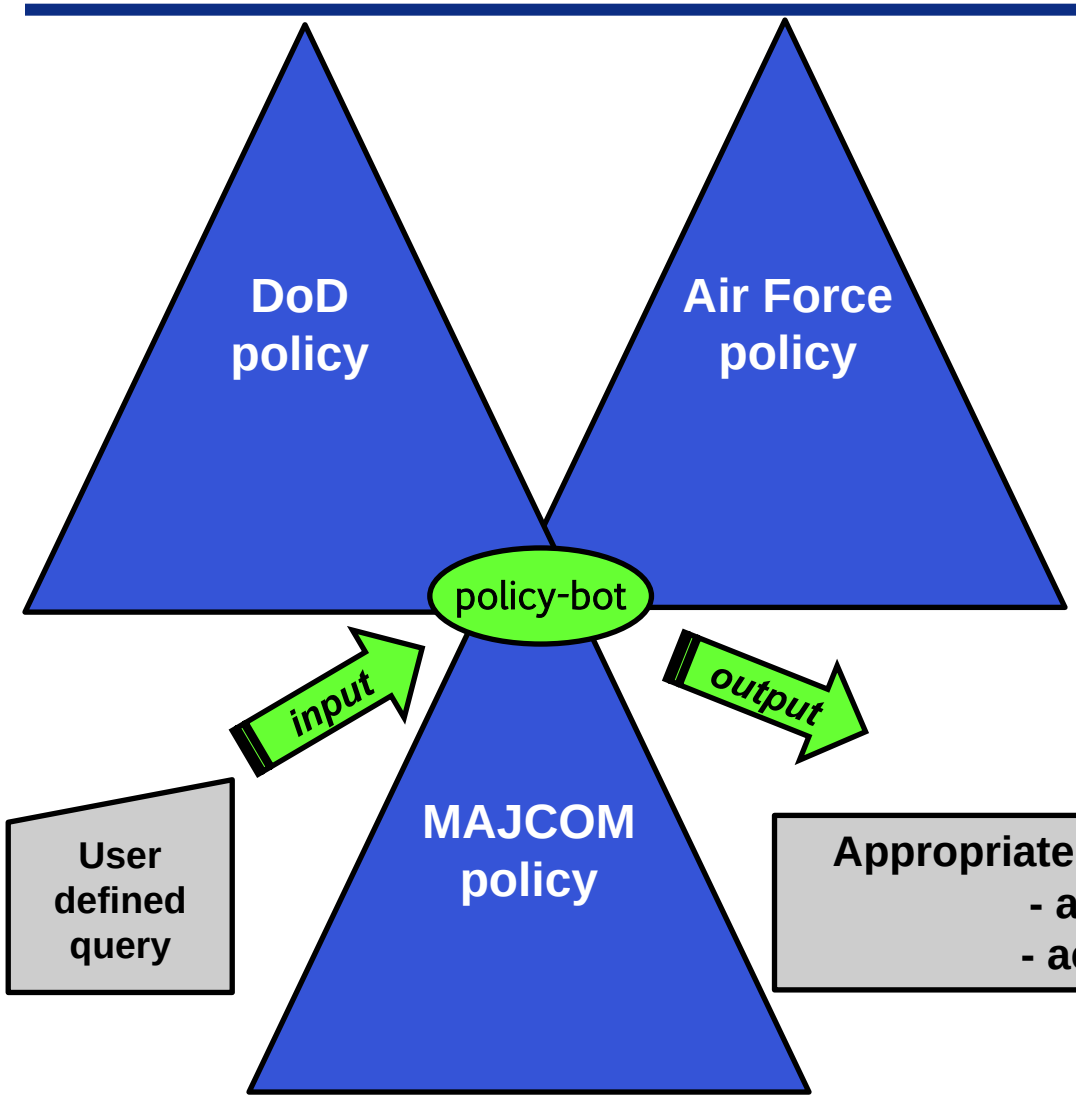
Meta-policy Pictorial View



Appropriate policy statements based on query:
- actions mandated in policy
- actions referenced in policy

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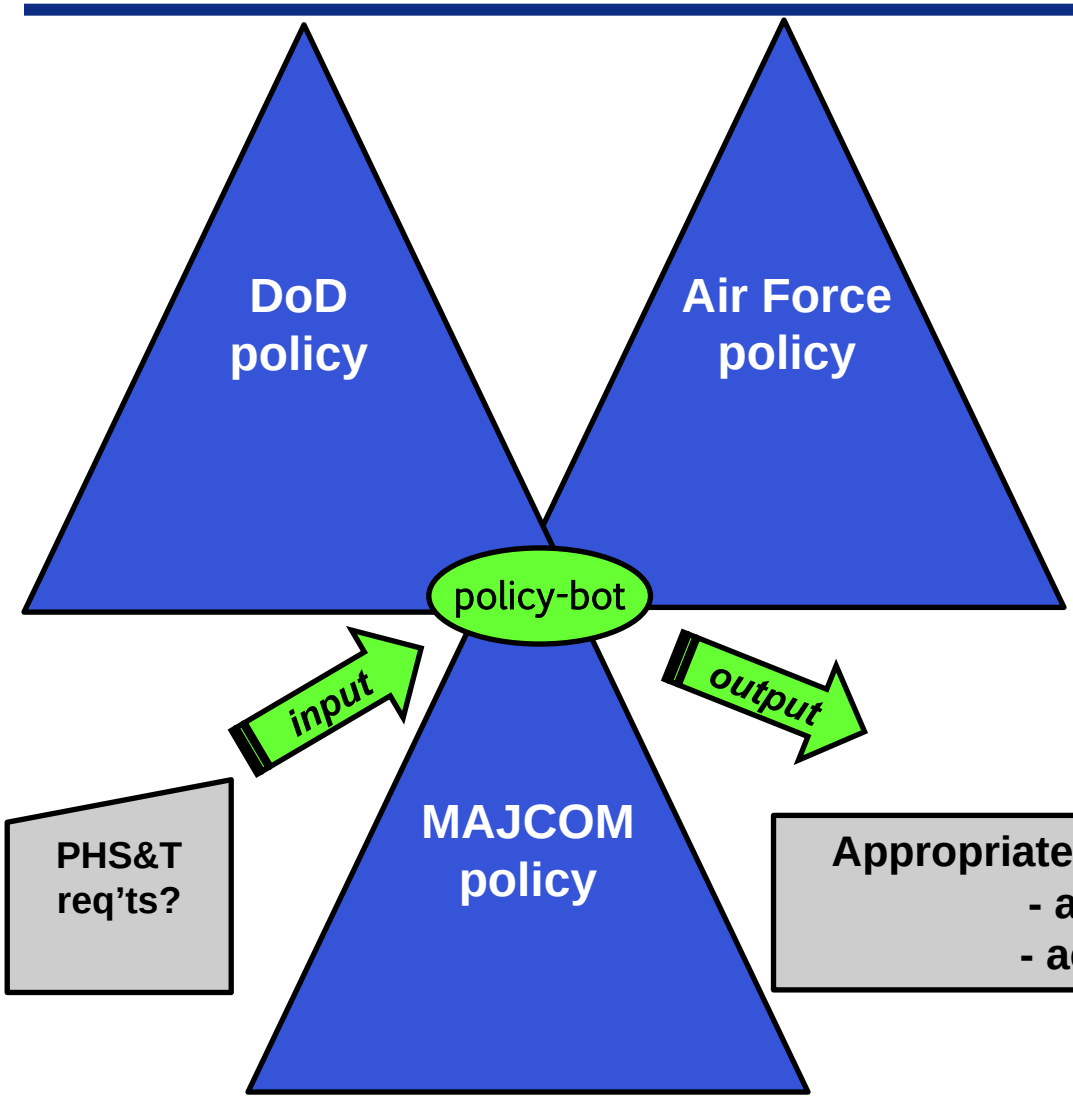
Meta-policy

Packaging, Handling, Storage and Transportation Query



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Meta-policy

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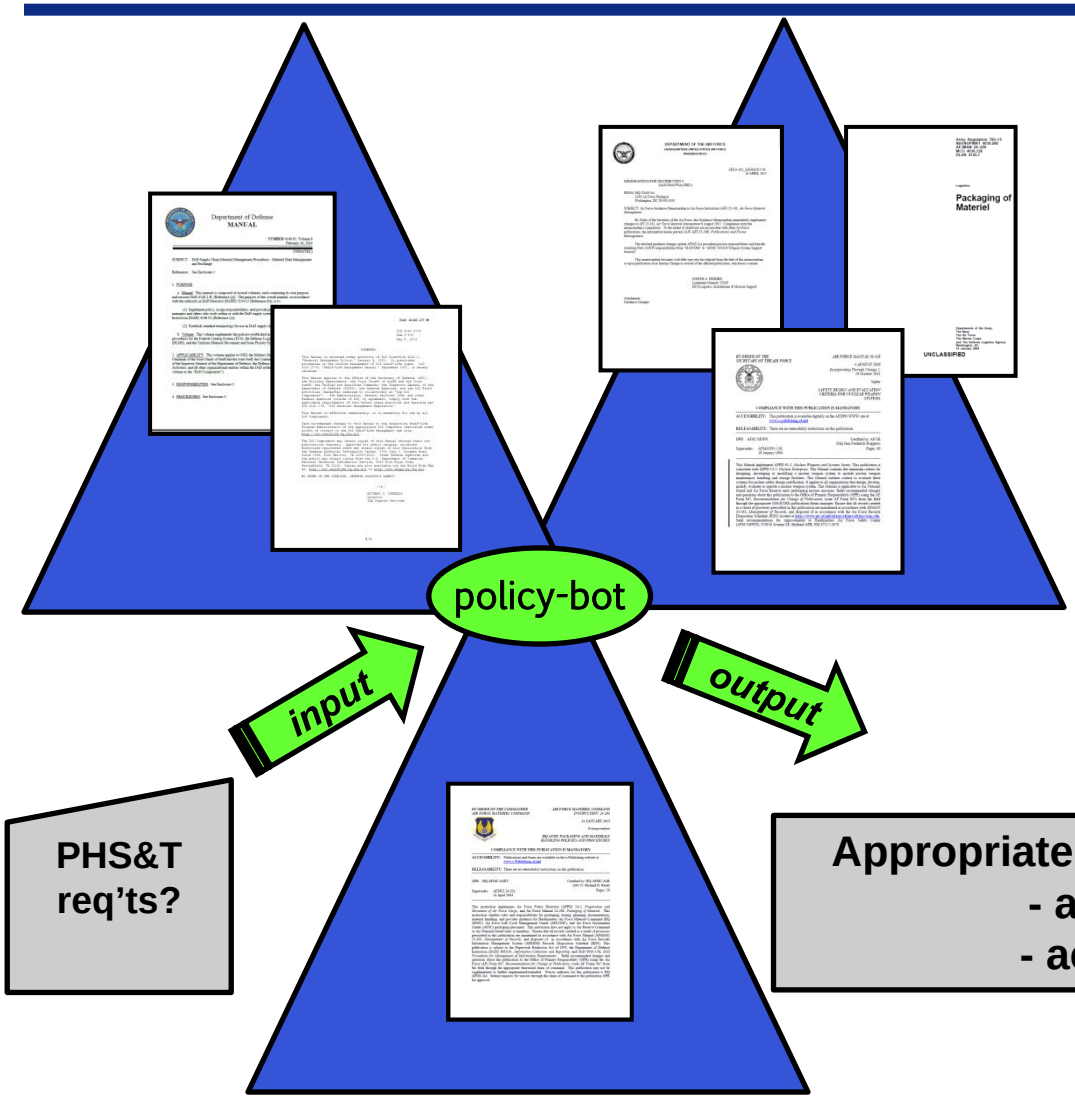

PHS&T req'ts?

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POLICY-BOT Output

Query: PHS&T requirements

ID	TITLE	DOC	PARA	MANDATE?	TEXT
1	*DOD SUPPLY CHAIN MATERIEL MANAGEMENT PROCEDURES: MATERIEL DATA MANAGEMENT AND EXCHANGE*	DoDM 4140.01 V-8	Encl 3, Para 1.b. (6)(c)2	Yes	DoD Components.. Provide to the DLA Logistics Information Service item-identifying characteristics and other logistics management data including identifying characteristics about Critical Safety Items.
2	*SHELF-LIFE ITEM MANAGEMENT MANUAL*	DoD 4140.27-M	Ch 2, para 2-1	Yes	PROVISIONING. During acquisition, materiel managers ensure that provisioned support items are coded and reviewed for shelf-life considerations in accordance with…

Partial output, for illustrative purposes only

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POLICY-BOT Output

Query: PHS&T requirements

ID	TITLE	DOC	PARA	MANDATE?	TEXT
3	*AIR FORCE MATERIEL MANAGEMENT*	AFI23-101	Para 10.2.7.1.	Yes	Storage of Controlled Materiel. AF activities will store controlled materiel according to the security classification and/or security risk or pilferage controls of the item IAW…
4	*PACKAGING OF MATERIEL*	AFMAN24-206	Ch 2, para 2-1.h.	Yes	Packaging required to maintain the item from the time of acquisition throughout its anticipated life-cycle will be provided at the time of acquisition.
5	*SAFETY DESIGN AND EVALUATION CRITERIA FOR NUCLEAR WEAPON SYSTEMS*	AFMAN91-118	Para 3.18.	Yes	Design air transportable delivery vehicles and support equipment to meet the general specifications of MIL-STD-1791 …
6	*HQ AFMC PACKAGING AND MATERIALS HANDLING POLICIES AND PROCEDURES*	AFMCI24-201	Ch 2, para 2.2.3.	Yes	Ensure Air Transportability Test Loading Agency (ATTLA) is considered for new pieces of equipment.

Partial output, for illustrative purposes only

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R2D2
Where to Find It

Find *R2D2* at *SAF/AQRE SharePoint and MilSuite*

Recent Upgrades released Summer 2015

-- general refresh – review pubs for updates
-- include 24-series (transportation)
-- include ratified International Standardization Agreements e.g. STANAGS

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- Questions?

- Comments?

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