



Air Force Life Cycle Management Center (AFLCMC)

Standard Process

for

Engineering Data Management

Process Owner: AFLCMC/EZSC

Date: 16 February 2017

Version: 3.0

Record of Changes		
Version	Effective Date	Summary
1.0	24 April 2014	Baseline standard process approved by the AFLCMC Standard & Process (S&P) Board on 17 Apr 14.
2.0	19 Nov 2015	Incorporated additional detail into the attached Work Breakdown Structure (WBS) and updated the process flow. Also included addition comments provided by the S&P Board. S&P Board approved 19 Nov 2015.
3.0	16 Feb 2017	Incorporated annual review comments – Mostly administrative comments – S&P Board approved 16 Feb 2017

Engineering Data Management Process

1.0 Description.

- 1.1 This Standard Process for Engineering Data Management describes the high level actions to identify, acquire, collect, organize, review, approve and store engineering data that is required to support a Program's Acquisition Strategy (AS).
- 1.2 Engineering data includes, but is not limited to, Computer Aided Design (CAD) data, CAD models, model based definition data sets, Gerber data, specifications, drawings, interface control documents, verification plans, and Master Bill of Materials (BOM). Engineering data provides the necessary design, engineering, manufacturing, testing and quality assurance requirements necessary to enable the procurement or manufacture of an interchangeable item that duplicates the physical and performance characteristics of the original item without additional design engineering effort or recourse to the original design activity or any third party. This engineering data needs to reflect the rights in technical data for which the Government is entitled to as well as appropriate STINFO markings.
- 1.3 This standard process applies to the Air Force Life Cycle Management Center (AFLCMC) Air System programs and related products (i.e., Avionics and Armaments) that have a need to acquire engineering data.

2.0 Purpose.

- 2.1 The purpose of the Engineering Data Management Standard Process is to consistently and effectively acquire and manage engineering data to support decisions throughout a program's life cycle. Implementing this standard process ensures a program office's long term engineering data requirements comply with the Program's AS, Intellectual Property Strategy (IPS) and logistics support requirements; and supports competition (procurement packages) throughout the life cycle.
- 2.2 This Standard Process serves as reference for the Program's Office, Program Manager, Program Support Manager, Configuration and Data Management (C/DM) and AFLCMC/LZPE's Engineering Data Management Specialist (EDMS) to successfully plan, document, and execute engineering data acquisition and management.
- 2.3 Support strategic planning (mission, vision, and objectives).
 - 2.3.1 Air Force Materiel Command (AFMC) Priority 2, *Standardize and Continually Improve Processes...Achieve Art of Possible*.
 - 2.3.2 AFLCMC Objective 2.1, "Standardize and continuously improve Center processes".

3.0 Potential Entry/Exit Criteria and Inputs/Outputs.

- 3.1 Entry Criteria. A Program Office's AS requires the acquisition and accountability for engineering data, to include appropriate rights in technical data.

3.2 Exit Criteria. The Program Office approves and accepts the engineering data and ensures that it has been successfully stored in the Government-approved Repository (e.g., Joint Engineering Data Management Information and Control System (JEDMICS) or Teamcenter).

3.3 Process Workflow and Activities.

4.0 Suppliers, Inputs, Process, Outputs, Customers (SIPOC), Table 1.

4.1 Process Flowchart. The process flowchart, **Figure 1**, represents the process to standardize and manage the Engineering Data Management process. These activities are further defined in Para 4.3 of the Work Breakdown Structure (WBS).

4.2 Work Breakdown Structure. The WBS, **Table 2**, provides additional detail for the flowchart activity boxes. The Microsoft Excel version of the WBS is in **Attachment 1**.

Table 1. SIPOC

Suppliers	Inputs	Process	Outputs	Customers
Contractor User	Engineering Data required	Engineering Data acquired	Engineering Data approved	AFLCMC, AFSC, DLA and User
Contractor User	Engineering Data submitted to JEDMICS or Teamcenter and DTIC	Engineering Data loaded into JEDMICS or Teamcenter and DTIC as needed	Engineering Data loading completed	AFLCMC, AFSC, DLA and User

Figure 1 Process Flowchart – AFLCMC Engineering Data Management Process

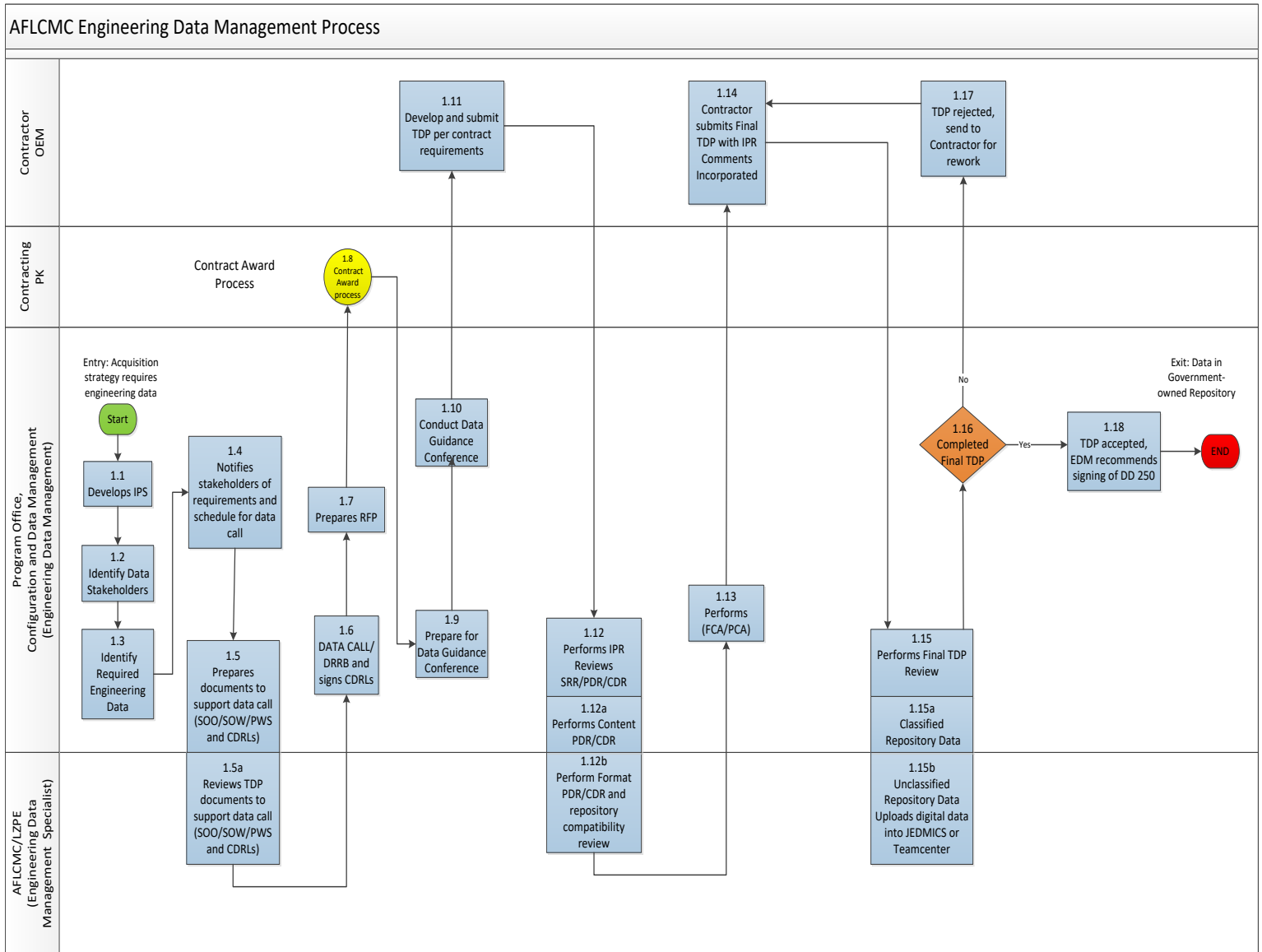


Table 2 WBS (1 of 4)

Lvl	WBS	Activity	Description	OPR	Days
1	1.0	Engineering Data Acquisition			
	Start	Acquisition Strategy	The Program Manager (PM) plan for program execution across the entire program's life cycle. It is a comprehensive, integrated plan that identifies the acquisition approach, and describes the business, technical, and support strategies that the PM plans to employ to manage program risks and meet program objectives.	Program Office	5
2	1.1	Develops Intellectual Property Strategy (IPS)	Develop Intellectual Property Strategy (IPS) to identify and manage the full spectrum of IP and related issues (e.g., technical data and computer software deliverables, patented technologies, and appropriate license rights) from the inception of a program and throughout its life cycle. The engineering data manager will typically work with the program manager and other functional support.	C/DM and EDMS	5
	1.2	Identify Data Stakeholders	Program management is ultimately responsible for pulling it all together, subject to approval by the Milestone Decision Authority, but this must be a team effort. The development and continuous updating of an effective and robust IP Strategy will require active participation of subject matter experts from a wide variety of disciplines, including engineering, logistics, contracting, cost and accounting, legal, and User.	C/DM and EDMS	5
2	1.3	Identify required engineering data	The Program Office identifies that engineering data is needed. This need can be for a new requirement, a follow-on requirement, or a modification to an existing requirement. The PM shall invite his/her functional support staff (stakeholders) to be part of the Integrated Process Team (IPT) to address the need for engineering data: Configuration and Data Management (C/DM), Engineering Data Management Specialist (EDMS), Engineering, Logistics, Financial Manager (FM), Contracting Officer, User, and Legal Counsel (as needed) should be part of this team. During this meeting, the participants will identify the needed data and data rights required to support the program throughout its lifecycle.	Program Office	5
2	1.4	Notifies stakeholders of requirements and schedule for data call	At the direction of the PM, the C/DM or other responsible official will initiate a data call for data requirements to be obtained from a contractor. The data call should be issued at least 6 months before the release of the request for proposal (RFP) or sealed bid. This effort can take many forms, such as being issued in writing or conducting an actual meeting. The data call must reach the entire Program's function staff that supports the program (e.g., Engineering, Logistics, Configuration Management, Test and Evaluation, Product Assurance, Safety, Human Engineering, Training, Intelligence, Contracting and Comptroller).	C/DM	1
2	1.5	Prepares documents to support data call (SOO/SOW/PWS and CDRLS)	After a data call process has been conducted, the Program Manager will convene a Data Requirement Review Board (DRRB). The C/DM, EDMS, and Contracting Officer will review the requested data and will ensure the engineering data is in compliance with program requirements the RFP instructions well as the contract requirements.	C/DM, EDMS and Contracting Officer	5
2	1.5a	Reviews documents to support data call (SOO/SOW/PWS and CDRLS)	The C/DM and EDMS will review the requested data and will ensure the engineering data is in compliance with program requirements.	EDMS	5

Table 2 WBS (2 of 4)

Lvl	WBS	Activity	Description	OPR	Days
2	1.6	DATA CALL/DRRB and signs CDRLs	The C/DM, with the assistance of the EDMS (AFLCMC/LZPE) will start the development of the Performance Statement of Work (PWS), Statement of Objectives (SOO) or a Statement of work (SOW) and CDRLs for engineering data. DOD 5010.12-M and Defense Federal Acquisition Regulations (DFARS) require that all technical data delivered under a DoD contract must be provided via a DD Form 1423 (CDRL). The CDRL provides a contractual method to direct the contractor to prepare and deliver data that meets specific approval and acceptance criteria. With the exception of data specifically required by DFARS, all data-generating or record-keeping data requirements shall be listed on the CDRL. These draft contractual documents will be reviewed by the User and other functional members prior to being released. The PM and C/DM will consolidate the contract CDRL packages and review them for correct format and the current Data Item Descriptions (DIDs) selected. The completed CDRL package then will be turned over to the Contracting Officer for formal processing.	CM	14
2	1.7	Prepares RFP	C/DM, along with other functional support team(s), will prepare the request for proposal.	C/DM	5
1	1.8	Contract Award Process	The Contracting Officer is responsible for ensuring that the requested engineering data deliverables are properly identified and incorporated in the solicitation and resulting contract award. This shall include mapping in RFPs to show how the solicitation, PWS or SOW, CDRLs, and DIDs relate to each other. The mapping in the RFP and the final award shall also list what data will be delivered, what format it will be in, what data rights (license) the Government will obtain, and which restrictive markings will be allowed on the data.	Contracting (PK)	
2	1.9	Prepare for Data Guidance Conference	The Data Guidance Conference is held 60-90 days after contact award and may be held in conjunction with Post Award Conference. The conference is a joint Government-Contractor review of the Government's contractual requirements to ensure that the Contractor understands their contractual obligations (i.e., format, deliverables, and data rights), resolve differences, and to review the Contractor's approach to satisfying the Government's contractual requirements.	Program Office (Functional Team)	5
	1.10	Conduct Data Guidance Conference	The conference is an opportunity to resolve differences of interpretation and provide alignment of the contractor's current TDP preparation systems with the Government's TDP requirements. Finally, the conference allows the Government the opportunity to ensure that the contractor understands that all technical data presented to the Government for acceptance shall be accurate, clear, complete, current, and adequate for intended purposes.	Program Office (Functional Team)	3
2	1.11	Develop and submit Technical Data Package (TDP) per contract requirements	Contractor will develop and submit the engineering data via a technical data package (TDP) in accordance with the contract requirements.	Contractor (OEM)	

Table 2 WBS (3 of 4)

Lvl	WBS	Activity	Description	OPR	Days
2	1.12	Perform In-Process Review (IPR) SRR/PDR/CDR	In-Process Reviews (IPRs) provide an opportunity to monitor the engineering data during preparation. These reviews also provide opportunities to verify the adequacy of the design activities, practices, and procedures, including quality assurance (QA) practices for data that will result in deficient (missing dimensions, tolerances, notes, and interface requirements), incomplete (missing reference documents, mandatory processes, etc.), and nonconforming (not in accordance with contractual requirements) data. Discovery of discrepancies during this review will facilitate and expedite the final review and final acceptance of the engineering data. IPRs can be accomplished in conjunction with System Requirements Review (SRR), Preliminary Design Review (PDR) and Critical Design Review (CDR).	Program office and C/DM	5-30
2	1.12a	Perform Content Review (PDR/CDR)	The C/DM and the Engineers will review the engineering data during the PDR and CDR reviews for technical content. The content information will support the design concept being briefed by the contractor during the PDR and CDR reviews.	C/DM and Engineers	10
2	1.12b	Perform Format PDR/CDR Repository compatibility review	C/DM will have the Contractor submit samples of their digital engineering data or 3D Models to the Government-owned Repository (JEDMICS or Teamcenter) for capability testing. Early testing will allow the Government-owned Repository personnel to work out problem areas early in the development process. The capability testing will continue throughout the development process until all of the engineering data have been successfully loaded and stored within the Government-owned Repository.	C/DM and EDMS	10
2	1.13	Performs (FCA/PCA)	A Functional Configuration Audit (FCA) is the formal examination of functional characteristics of a configuration item, or system, to verify that the item has achieved the requirements specified in its functional and/or allocated configuration documentation. Physical Configuration Audit (PCA) is the formal examination of the "as-built" configuration of a configuration item against its technical documentation to establish or verify the Configuration Item's Product Baseline.	C/DM	5
2	1.14	Contractor submits Final TDP with IPR comments incorporated	Contractor's technical data package is a technical description of an item meeting requirements for supporting an acquisition strategy, production, engineering, and logistics support. The description defines the required design configuration and procedures to ensure adequacy of item performance. It consists of all applicable technical data such as drawings, associated lists, specifications, standards, performance requirements, quality assurance (QA) provisions, and packaging details. During the IPRs, the government will make comments to TDPs and the contractor will update the TDP packages.	Contractor	1
2	1.15	Performs Final TDP Review	The final TDP submitted to the government will be reviewed by the C/DM and EDMS for contract compliance, technical content errors and correct data markings. The final TDP is reviewed for contract compliance.	C/DM and EDMS	14

Table 2 WBS (4 of 4)

Lvl	WBS	Activity	Description	OPR	Days
2	1.15a	Classified Data Repository	Currently Government-owned Repositories such as JEDMICS are not cleared for classified data. Therefore, the Program Office must develop a plan on how it will maintain the Program's classified engineering data. The PM will develop a process to maintain classified data internally or may choose to contract with the Prime Contractor to store and maintain the classified data. The Program Office will ensure that procedures will be developed for accessing, storing and retrieving classified data by the functional staff and User. The Program Office will ensure that all security procedures will be developed and followed. The C/DM will ensure that adequate processes are in place. C/DM will develop a self-inspection program to ensure compliance. The results of these self-inspections will be sent to the organization security office with a copy sent to AFLCMC/EZSC for review. At any time a security violation has occurred, the organization Security Office and AFLCMC/EZSC will be notified.	C/DM	1
3	1.15b	Unclassified Repository Data Uploads digital data into JEDMICS or Teamcenter	Engineering data that is determined to be unclassified may be input into JEDMICS or Teamcenter.	EDMS	1
	1.16	Completed Final TDP (Yes)	The Completed Final TDP package will be delivered to the program office to be reviewed for contract compliance. The TDP is found to be completed and meets the contract requirements then TDP is accepted and the Program's Office C/DM (EDM) will recommend that the DD Form 250 to be signed off.	C/DM	14
	1.16	Completed Final TDP (No)	The Completed Final TDP package is delivered to the program office to be reviewed for contract compliance. If the TDP is found to be unacceptable and the Final TDP package does not meet the contract requirement will be returned to the Contractor for correction. The Final TDP will then be resubmitted for review (1.15).	C/DM	14
2	1.17	TDP accepted EDM recommends signing of DD Form 250	After the EDMS ensure that the entire engineering data package meets the contract requirements and is loaded into JEDMICS or Teamcenter, the EDMS will notify the C/DM to approve the Program's Contract CDRL for engineering data.	C/DM	1
2	1.18	TDP rejected, send to Contractor for rework	Contractor submits copies of all new and revised engineering data for Government review. The C/DM and EDMS will verify that all previously noted discrepancies, as well as all discrepancies revealed during the contract performance, have been corrected. If the data is found acceptable, the C/DM will notify the Contractor in writing. If discrepancies still exist, the C/DM will notify the PM and contracting Officer for resolution.	Contractor OEM	14
2	Exit	Exit	Acquisition of engineering data process is completed and C/DM data accountability is assured by the PM.	C/DM	1

5.0 Measurement.

5.1 Process Results. Efficiency and effectiveness of this Standard Process will be measured and reported to AFLCMC/EZSC to show the engineering data availability. The ultimate goal of acquiring engineering data is to ensure the Program technical baseline is documented, properly marked, and meets the Government's contractual requirements. To ensure that the engineering data meets the above requirements, the engineering data must be made available for review during the Program's technical reviews (i.e., PDR, CDR and Physical Configuration Audits (PCA)). Failure to review the engineering data will lead to technical content discrepancies, multiple configuration issues and incorrect markings (i.e., Data Rights and Technical Distributions Statements).

5.2 Process Evaluation.

5.2.1 The Program Office's C/DM personnel along with the assistance from the Product Data Services Division (AFLCMC/LZP), Engineering Data Management Branch (AFLCMC/LZPE) will review and monitor the development of the engineering data during the program's technical reviews for contract compliance and meets the exit criteria. This information will be inputted by the Program Office's C/DM into the AFLCMC Process Metric Dashboard site every six months. The AFLCMC Process Metric Dashboard site is located at

<https://cs4.eis.afmc.af.mil/sites/1749/appV11/MetricReporting.aspx>.

5.2.2 The recommended engineering data availability during the Program's technical reviews is as follows:

5.2.2.1 PDR. 10% - 25% of the engineering data.

5.2.2.2 CDR. 75% - 90% of the engineering data.

5.2.2.3 PCA. 100% of the engineering data.

5.3 Process Evaluation. Metrics will be evaluated to determine the percentage of engineering data available and reviewed at the Program's technical reviews. This information will be used to identify opportunities for improvement to ensure that the process description specified in the WBS (Table 2) is met or, when deemed appropriate, adjusted. The Configuration and Data Management Branch (AFLCMC/EZSC) will review at the conclusion of the semi-annual reporting the results with the Program Office's C/DM, Product Data Services Division (AFLCMC/LZP), and Engineering Data Management Branch (AFLCMC/LZPE) to address lessons learned and process improvements.

6.0 Roles and Responsibilities.

6.1 Configuration/Data Management Branch (AFLCMC/EZSC) (Process Owner).

6.1.1 Acts as Center's office of primary responsibility for the Engineering Data Management Process.

6.1.2 Conducts monthly Engineering Data Working Group meetings.

- 6.1.3 Provides engineering data training, consultation, support, and develops evaluation recommendations to Program Offices as requested.
- 6.1.4 Collects self-assessment information from the Program Office's C/DM and EDMS to determine compliance with this Process Standard.
- 6.1.5 Coordinates, advises, and provide training for engineering data issues. Initial training for this engineering data process will be accomplished by utilizing focus weeks, town hall meetings, and training requests from Program Offices.

6.2 Program Manager.

- 6.2.1 Ensures the acquisition of engineering data through contractual vehicles, so that engineering data needed for research and development, acquisition, logistics support and sustainment is available for use by authorized users throughout the life of the weapon system.
- 6.2.2 Ensures data rights assertion lists are clear and precise, monitors data markings on deliverables to ensure they are in accordance with the contract, ensures deliverables are sufficient to support future phases of acquisition or future competition, and secures funds to acquire engineering data up front.
- 6.2.3 In accordance with the Contracting Officer and Legal Counsel, ensures the IPS is established and maintained throughout the Program life cycle. The IPS will address the Program's data rights requirements.
- 6.2.4 Ensures classified (Secret and Top Secret) engineering data are properly stored utilizing a data management system within an Integrated Digital Environment (IDE) that allows the program to store, access, maintain, manipulate, and exchange classified digital data.
- 6.2.5 Responsible for coordinating and acquiring engineering data support from the Configuration Management organization for each acquisition and modification program (e.g., via delegation letter).
- 6.2.6 Ensures that engineering data is acquired to support activities such as Operational Safety, Suitability and Effectiveness (OSS&E) Assurance, Integrity Programs, Sustaining Engineering, Reliability Management, and Configuration Management.
- 6.2.7 Ensures unclassified engineering data is loaded into a Government-owned Repository (e.g., JEDMICS, Teamcenter) and is maintained and updated throughout the Program life cycle; especially for use in Program's modification efforts and reprourement packages.

6.3 Director of Engineering.

- 6.3.1 Ensures the Systems Engineering (SE) process supports using and attaining the requisite engineering data to obtain and maintain OSS&E certifications (e.g., Airworthiness and Information Assurance).

6.4 Chief Engineer.

- 6.4.1 Ensures C/DM coordinate program-specific engineering data requirements and works with the EDMS.
- 6.4.2 Ensures the requisite technical information is contracted, in order to design for and verify performance, and to obtain and maintain OSS&E certifications.
- 6.4.3 Ensures engineering data is coordinated and approved in accordance with the Program's contract requirements.

6.5 Configuration/Data Management.

- 6.5.1 The Program Office's C/DM office will perform the duties of the Engineering Data Management.
- 6.5.2 Plans for the acquisition of engineering data and determines engineering data requirements based on the Program's technical requirements and Acquisition Strategy.
- 6.5.3 In coordination with the Program Manager and Contracting Officer, manages the engineering data acquisition process through final inspection and acceptance.
- 6.5.4 Evaluates all contract, system configuration, and system performance changes (e.g., Engineering Change Proposals) for engineering data requirements and risk/impact including those associated with rights in data management, validation, adjudication and negotiation activities.
- 6.5.5 Ensures the Program Office's Intellectual Properties Strategy includes data rights and conforming data rights markings (e.g., Unlimited, Limited, Restricted, and Government Purpose Rights) are applied in accordance with the contractual requirements.
- 6.5.6 Ensures appropriate Scientific and Technical Information (STINFO), Distribution, Export Control, and Destruction Notice markings are applied correctly.
- 6.5.7 Consults with Contracting Officer on acquisition of commercial products.
- 6.5.8 Provides technical guidance to Program Office concerning data rights, DoD policy, and procedures on procurement and of engineering data. Ensures only essential data is procured during acquisitions.
- 6.5.9 Coordinates and chairs the Data Call to identify data requirements and establishes operating instructions for Data Requirements Review Board (DRRB).
- 6.5.10 Ensures Item Unique Identifier (IUID) and configuration identification requirements (e.g., nameplate) are established and adequately defined within the engineering data packages.

- 6.5.11 Assists in contract negotiations for engineering data, monitors delivery of Contractor prepared data by establishing procedures for receipt, inspection, acceptance, and access prior to and after contract award.
- 6.5.12 Ensures data is collected and archived within an Engineering Data Activity Records File (EDARF). See **Attachment 2** for an example of an EDARF Table of Contents.

6.6 Chief of Logistics.

- 6.6.1 Ensures that the Program Office's Technical Order Manager (TOMA) assist the C/DM Office with identify engineering data requirements for the development of the Program's Technical Orders (TO).
- 6.6.2 When requested by the Program Office's C/DM office, supports the Contractor's Engineering Data Guidance Conference and all In-Process Reviews (IPR) to ensure the engineering data is being developed in accordance with the contract requirements and data rights assertions.

6.7 Engineering Data Management Specialist.

- 6.7.1 EDMS responsibilities are performed by the Engineering Data Management Branch (AFLCMC/LZPE) personnel located at Hill, Robins, and Tinker Air Force Bases (AFB). The EDMS roles and responsibilities are similar to those of the Program Office's EDM (Para 6.5), except that the EDMS performs system compatibility checks and inputs the engineering data into the Government –owned Repository (e.g., JEDMICS, Teamcenter).
- 6.7.2 When requested by Program Office C/DM office, supports the Contractor's Engineering Data Guidance Conference and all In-Process Reviews (IPR) to ensure the engineering data is being developed in accordance with the contract requirements and data rights assertions.
- 6.7.3 May need to assists the Program Office with classified (Secret and Top Secret) engineering data to ensure proper security controls and markings are enforced.
- 6.7.4 Ensures the contractor-generated digital file (engineering drawings or 3D Models) is loaded into a Government-owned Repository (e.g., JEDMICS or Teamcenter) in a format compatible with the *Product Data Specification* (Air Force Drawing No. 9579776) (Cage Code 98752) requirements. The compatibility review will be accomplished by the Product Data Services Division (AFLCMC/LZPE) located at Hill, Robins, and Tinker AFBs.
- 6.7.5 Works with Program Engineers, Drafting Department, and Program Office's for processing of Engineering Orders (EO); signs AFMC Form 2602, Engineering Document Release Record; maintains historical records of past Product Support Business Case Analysis (BCA); and establishes and maintains an Engineering Data Activity Records File (EDARF).
- 6.7.6 Upon request of program office or AFLCMC/EZSC, AFLCMC/LZPE's EMDS personnel will accomplish engineering data training, consultation, and support as requested.

6.8 Contracting Officer.

- 6.8.1 Ensures Federal Acquisition Regulations (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS) clauses pertaining to TDP rights in data are included in the contract.
- 6.8.2 Ensures Deferred Ordering and Deferred Delivery clauses are established and remain on contract.
- 6.8.3 Ensures that negotiated contract changes to the engineering data contractual requirements (CDRL, SOO, SOW, and PWS) have been coordinated and approved by the Program Manager, C/DM and EDMS prior to contract award.

6.9 Legal Support Counsel.

- 6.9.1 Provides the Contracting Officer's and acquisition team members' legal support and resolution of questions regarding Contractor data markings as required by the contract.

7.0 Tools. A standard product tool has not been selected for this process. However, the following paragraphs describe existing tools that may be used to support this process.

- 7.1 Acquisition Streamlining and Standardization Information System (ASSIST). A database system for DoD-wide standardization document information. ASSIST is located at the Defense Logistics Agency Document Services, Philadelphia PA. ASSIST-Online provides web-based access to digital documents on the ASSIST database. ASSIST is the official source of DoD specification and standards. ASSIST provides an online, interactive listing of source documents and DIDs that DoD has approved for repetitive contractual application in DoD acquisitions and those that DoD has cancelled or superseded. ASSIST can be accessed at <https://assist.dla.mil/online/start/index.cfm>.
- 7.2 Product Data Acquisition (PDAQ) Website. PDAQ is an AF/A4I initiative to provide tools, guidance, instruction, and training to help acquisition personnel identify, define, acquire data, data rights requirements, develop data strategies, properly request the data with needed government rights through request for proposal language, inspect and accept data deliverables received. Contained on the Air Force Portal, this guidance also addresses essential DFARS clauses, CDRLs, DIDs, common language to put in contracts and requirements documents, and other product data considerations that should be made throughout the acquisition life cycle. The PDAQ website is: <https://www.my.af.mil/gcss-af/USAF/content/pdaqtraining>.
- 7.3 Joint Engineering Data Management Information and Control System (JEDMICS). JEDMICS is a DoD initiative for the management and control of engineering drawings. It is a DoD standard engineering data management and repository system that provides the means to efficiently convert, store, protect, process, locate, receive, and output information previously contained on aperture cards and paper. Large engineering drawings and related text are scanned and stored on network-accessible digital media, providing online access at distributed workstations. The JEDMICS application also provides the capability to accept data directly from various other digital media processes. The JEDMICS website is located at: <https://jedmics.af.mil/webjedmics/index.jsp>.

- 7.4 Military Engineering Data Access Location System (MEDALS). MEDALS is the only data locator system that requires a user account. It is an interactive online system that is accessed globally and indicates quickly and easily where engineering drawings or documents reside. The MEDALS program is a research tool, or first discovery mechanism, for those who do not know where engineering documents might reside, or where all revision levels are located. It also contains information on which repositories are holding specific engineering documents. The MEDALS website is located at: <https://www.logisticsinformationservice.dla.mil/medals/>.
- 7.5 AFLCMC/EZSC Configuration and Data Management SharePoint. This site contains information about AFLCMC Configuration and Data Management. The AFLCMC Configuration and Data Management SharePoint is located at: <https://cs.eis.afmc.af.mil/sites/AeroEngDisciplines/Systems/CDM/default.aspx>.
- 7.6 AFLCMC/LZP Product Data Services Division SharePoint. This site contains information about AFLCMC/LZP Product Data Services. The AFLCMC/LZP Product Data Services Division SharePoint is located at: <https://org4.eis.afmc.af.mil/sites/1751/AFLCMCLZP/LZP%20VSA%20Documents/Fo rms/AllItems.aspx?RootFolder=%2fsites%2f1751%2fAFLCMCLZP%2fLZP%20VSA%20Documents%2fLZPE%20%28Eng%20Data%29%20VSA%20Docs&FolderCTID=%26View=%7bAA1535D3%2d9FE3%2d47EF%2dBD4F%2d203D0BE2125A%7d>.

8.0 Training.

- 8.1 Training Plan: This Standard Process will be briefed to AFLCMC senior leaders, pushed down to all personnel, and the standard process document will be available on the AFLCMC Process Directory (APD): <https://cs4.eis.afmc.af.mil/sites/1534/ProcDir/default.aspx>
- 8.2 Available Training.
- 8.2.1 The Air Force Institute of Technology (<http://www.afit.edu/LS/>) and the Defense Acquisition University (<http://www.dau.mil/default.aspx>) offers a series of technical data, data rights, acquisition, and logistical courses, available in both residential and web-based courses.
- 8.2.2 Air Force Institute of Technology offers a resident class Systems 150, “*Engineering Data Management*.” This class intended to help the user understand engineering data acquisition concepts, the responsibilities of the engineering data manager and other valuable information. <http://www.afit.edu/LS/courseList.cfm>.
- 8.3 Configuration and Data Management Branch (AFLCMC/EZSC) routinely offers training classes for engineering data and data rights during AFLCMC Focus Weeks.
- 8.4 Product Data Acquisition. The Product Data Acquisition (PDAQ) website offers 10- web-based Training modules that include: Overview and Introduction of PDAQ, Laws, Policy, and Guidance, Product & Software Data Deliverables, Data Rights, IR & D Data Rights, Intellectual Property (IP) Strategy, Request for Proposal, Integrated Data Environments, Data Rights Assertions, and Data Deliverables & Data Rights in Source Selection Evaluations. The website is located at: <https://www.my.af.mil/gcss-af/USAF/content/pdaqtraining>.

9.0 Guiding Principles, Ground Rules, and Definitions.

9.1 This standard process is mandatory for AFLCMC programs acquiring engineering data.

9.2 This standard process does not replace or supersede any existing laws, regulations, directives, policies, or instructions for acquiring engineering data.

9.3 This standard process supersedes all previously followed processes for acquiring engineering data.

9.4 Acronyms.

ACE	Acquisition Center of Excellence
AFB	Air Force Base
AFI	Air Force Instruction
AFLCMC	Air Force Life Cycle Management Center
AFMC	Air Force Materiel Command
AFPAM	Air Force Pamphlet
AFSC	Air Force Sustainment Center
AP	Application Protocol
APD	AFLCMC Process Directory
AS	Acquisition Strategy
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ASSIST	Acquisition Streamlining and Standardization Information System
BCS	Business Case Analysis
BOM	Bill of Materials
CAD	Computer- Aided Design
C/DM	Configuration and Data Manager
CDR	Critical Design Review
CDRL	Contractor Data Requirement List (DD Form 1423)
CM	Configuration Management
DFARS	Defense Federal Acquisition Regulation Supplement
DID	Data Item Description
DLA	Defense Logistics Agency
DoD	Department of Defense
DRRB	Data Requirements Review Board
DTIC	Defense Technical Information Center
EDARF	Engineering Data Action Records File or Engineering Data Activity Records
EDM	Engineering Data Manger
EDMS	Engineering Data Management Specialist
EO	Engineering Order
FAR	Federal Acquisition Regulations
FCA	Functional Control Audit
FM	Financial Manager
FOUO	For Official Use Only
IDE	Integrated Digital Environment
IPR	In-Process Review



IPS	Intellectual Property Strategy
IPT	Integrated Product Team
IUID	Item Unique Identifier
JEDMICS	Joint Engineering Data Management Information and Control System
LG	Logistics Directorate
MEDALS	Military Engineering Data Access Location System
OEM	Original Equipment Manufacture
OSS&E	Operational Safety , Suitability and Effectiveness
PAC	Post Award Conference
PCA	Physical Control Audit
PDAQ	Product Data Acquisition
PDR	Preliminary Design Review
PK	Contracting
PM	Program Manager
PWS	Performance Work Statement
RFP	Request for Proposal
SE	System Engineering
S&P	Standard and Process
SIPOC	Supplier, Inputs, Process, Outputs, Customers
SOO	Statement of Objectives
SOW	Statement of Work
SRR	System Requirement Review
STD	Standard
STINFO	Scientific and Technical Information
TDP	Technical Data Package
TO	Technical Order
TOMA	Technical Order Management Agency
USC	United States Code
WBS	Work Breakdown Structure

10.0References to Law, Policy, Instructions, and Guidance.

- 10.1 10 United States Code 2320, *Rights in technical data*
- 10.2 10 United States Code, 2304, *Contracts: Competition Requirements*, Para f (4).
- 10.3 Federal Acquisition Regulation Part 27, Patents, Data, and Copyrights; Subpart 27.4, *Rights in Data and Copyrights*
- 10.4 Defense Federal Acquisition Regulations Part 227, *Patents, Data, and Copyrights*; Sub Part 227.4 *Rights in Data and Copyrights*
- 10.5 DoD 5010.12M, *Procedures for the Acquisition and Management of Technical Data*, 14May 93.
- 10.6 Interim DoDI 5000.02, *Operational of the Defense Acquisition System*, 25 Nov 13.
- 10.7 MIL-STD-31000A, *Technical Data Packages*, 26 Feb 13.
- 10.8 AFI 63-101/20-101, *Integrated Life Cycle Management Center*, 7 Mar 13.

- 10.9 AFI 63-131, *Modification Management*, 19 Mar 13.
- 10.10 AFMCI 21-401, Engineering Drawing, Data Storage, Distribution and Control System, 30 March 15.
- 10.11 AFMCMAN 21-2, Engineering Data Storage, Distribution, and Control, 25 Jun 97.
- 10.12 AFPAM 63-128, *Integrated Life Cycle Management*, 10 July 2014.
- 10.13 AFLCMC Standard Process for (P03) *Technical Order (TO) Emergency and Urgent Changes*, dated 29 May 2013.
- 10.14 Understanding and Leveraging Data Rights in DoD Acquisitions
<https://acc.dau.mil/CommunityBrowser.aspx?id=657494>
- 10.15 Intellectual Property Strategy Brochure
https://acc.dau.mil/adl/en-US/713394/file/79249/IP%20Strategy%20Brochure_Final%202-10-15.pdf

List of Attachments:

Attachment 1: MS Excel version of the complete WBS	 EDM WBS Attachment
Attachment 2: Example of EDARF	 ATTACHMENT 2 EDARF file.docx