

**BY ORDER OF THE COMMANDER
AIR FORCE RESEARCH LABORATORY**

**AIR FORCE RESEARCH LABORATORY
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Communications and Information

***ENTERPRISE BUSINESS INFORMATION
TECHNOLOGY REQUIREMENTS (EBITR)***

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements DoD Directive 8000.01, *Management of DoD Information Resources and Information Technology*, AF Policy Directive (AFPD) 33-3, *Information Management*, and Air Force Materiel Command Policy Directive (AFMCPD) 33-4, *Centralized Planning and Control of AFMC Information Technology (IT) Investments*. It provides guidance and procedures that AFRL personnel must use to document and submit requirements for potential implementation in the AFRL Enterprise Business System (EBS). This instruction applies to all AFRL personnel. This publication may be supplemented at any level, but all direct Supplements must be routed to the OPR of this publication for coordination prior to certification and approval. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF IMT 847 through the appropriate functional chain of command. Request for waivers must be processed through command channels to the publication OPR for consideration. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

1. Overview. AFRL's Enterprise Business System (EBS) provides the information technology (IT) implementation for some of AFRL's primary business processes. EBS is comprised of a highly integrated set of tailored commercial-off-the-shelf (COTS) products and interactive tools supporting AFRL's business and management processes. Requirements identified and managed

using the Enterprise Business Information Technology Requirement (EBITR) process drive the capabilities implemented as part of EBS. The DoD definition of a requirement is: “An established need justifying the timely allocation of resources to achieve a capability to accomplish approved military objectives, missions, or tasks.” In the context of this instruction, the need relates to voice-of-the-customer (e.g., functionals, end-users) input; and the objectives, missions, or tasks relate to those requirements necessary to support the planning, execution, and support of the AFRL enterprise. The EBITR process is a disciplined approach to ensure compliance with Air Force Materiel Command Instruction (AFMCI) 63-1201, *Implementing Operational Safety Suitability and Effectiveness (OSS&E) And Life Cycle Systems Engineering* and Military-Handbook-61A, *Configuration Management Guidance* with regard to requirements management, control, and traceability.

1.1. Before a requirement can be managed, it must be created and fully described. The closer a voice-of-the-customer input (i.e. need) is to a “good” requirement directly associates with the likelihood of a successful implementation. To ensure user inputs mimic good requirements, the following characteristics should be considered as they are identified by submitters. A good requirement is verifiable, unambiguous, complete, consistent, achievable, performance based, and represents the appropriate level of system hierarchy. A submitter, at a minimum, should focus on their requirement being verifiable, unambiguous, and complete. Once submitted by the submitter, the requirements are refined by the EBITR Integrated Product Team (IPT) consisting of the submitter, capability champion(s), functional area representative(s), AFRL/XPO, Operating Instruction (OI) owner, and EBS PMO. EBITR IPT members should address enterprise requirement characteristics not defined by the submitter including consistency, achievability, whether it is performance based and represents the appropriate level of system hierarchy. These characteristics are defined in **Table 1** Once identified and defined, requirements are vetted by an enterprise Functional Review Board (FRB) to prioritize and schedule into future EBS implementations.

Table 1. Requirement Characteristic Definitions and Identification Responsibility

CHARACTERISTIC	IDENTIFIED BY
Verifiable – The requirement should not be defined by ambiguous words, e.g., excessive, sufficient, resistant, minimal, etc. Expected performance and functional utility should be expressed in a manner that allows verification to be objective, preferably measureable quantitatively.	Submitter
Unambiguous – The requirement should have only one possible meaning so it is uniquely testable and verifiable.	
Complete – The requirement should contain all information needed to interpret and verify the requirement, including environmental and/or operational conditions relevant to the requirement.	
Consistent – Conflicts with other requirements should be resolved up front prior to release of a Request For Proposal (RFP) or Engineering Change Proposal (ECP).	EBITR IPT
Achievable – The requirement should specifically reflect need or objective for which a solution is technically realistic at costs considered affordable.	
Appropriate Level of System Hierarchy – The requirement should not be too detailed that it constrains solutions for the current level of design, e.g., detailed requirements relating to components would not normally be in a system-level specification.	
Performance Based – The requirement should be expressed in terms of need, not solution, i.e., it should address “why” and “what” of a need, not how to do it.	

2. Roles and Responsibilities. EBITR uses the following roles to properly capture, vet, approve, and execute capabilities and/or requirements. **Table 2** depicts the involvement each role has in the processes identified above. The EBITR FRB Charter details responsibilities for effective management and execution of each review board.

Table 2. Responsibility Matrix

	XPO	Submitter	Champion/Func'l Rep	EBS PMO	FRB
2.1 Requirement's Identification					
2.1.1 Solicit Requirement	R	I	I	I	I
2.1.2 Describe Requirement		R	C		C
2.1.3 Submit Requirement	I	R	C		C
2.2 Requirement's Review and Planning					
2.2.1 Define Team	C	C	R	C	I
2.2.2 Refine Requirements	C	C	R	C	I
2.2.3 Qualify Requirement	C	C	R	C	I
2.2.4 Package Requirement	R	I	C	C	I
2.3 Requirement's Review and Prioritization					
2.3.1 Socialize Requirement	C	I	I	I	R
2.3.2 Rank Requirements	C	I	I	I	R
2.4 Requirement's Approval					
2.4.1 Align Requirements with Strategic Plan	R	I	C	C	C
2.4.2 Propose Functional Baseline	R	I	C	C	C
2.5 Requirement's Execution					
2.5.1/2/3 Allocate Resources	C	I	C	R	C
2.5.4 Establish Allocated/Product Baselines	C	I	C	R	C
2.5.5 Report Implementation Deviations	I	I	I	R	I
R	Responsible – The one ultimately answerable for the correct and thorough completion of the deliverable or task. There must be only one responsible specified for each task or deliverable.				
C	Consulted – Those whose opinions are sought, typically subject matter experts; and with whom there is two-way communications.				
I	Informed – Those who are kept up-to-date on progress. Often only on completions of the task or deliverable; and with whom there is just on-way communication.				

2.1. **Office of Primary Responsibility (AFRL/XP and AFRL/XPO).** Provides staffing and executive oversight, and chairs the EBITR process through the Functional Review Board (FRB) detailed in **paragraph 2.5**.

2.1.1. Defines, maintains, and executes a corporate process for managing AFRL's enterprise-level business information technology requirements from identification through handoff to the development organization and post-implementation feedback.

2.1.2. Analyzes EBS architectural aspects of functional requirements ensuring compatibility and compliancy with AFRL and Air Force level systems. Develops and maintains EBS Strategic Plan and Functional Baseline.

2.2. **Submitter.** Defines potential enterprise requirements for submission into the EBITR process.

2.3. **Requirement Champion/Functional Area Representative.** Collaborates with Enterprise stakeholders to help construct, refine, and quantify a requirement's business value and priority.

2.3.1. Authors initial Functional Requirements Specification (FRS).

2.3.2. Evaluates and makes recommendations on all aspects of a capability/tool through the entire product life cycle.

2.3.3. Ensures requirements have consistent, high-level support within the originating organization or entity.

2.3.4. Establishes review boards, IPTs and/or Working Groups with participants from all TDs/711 HPW to define requirements and business value.

2.3.5. Refines potential enterprise business requirements ensuring characteristics of a "good" requirement are met in preparation for submission into the EBITR process.

2.3.6. Identifies business value of requirements using quantitative (where applicable) and qualitative statements.

2.3.7. Participates in the EBITR review process.

2.3.8. Assists during development and implementation by providing details about needs and associated requirements; supports design reviews; provides personnel for acceptance testing; and provides training requirements.

2.3.9. Determines if there are any higher headquarters directives or downward directed systems that will impact a requirement.

2.4. **EBS Program Management Office (AFRL/RCB).** Responsible for lifecycle management and sustainment of EBS.

2.4.1. Provides rough order of magnitude (ROM) estimates for implementing requirements.

2.4.2. Develops and maintains allocated and product baselines.

2.4.3. Provides progress updates and identifies significant schedule changes as soon as they occur.

2.4.4. Involves stakeholders in Government Acceptance Testing (GAT)

2.4.5. Determines if there are any higher headquarters directives or downward directed systems that will impact a requirement.

2.4.6. Maintains high level EBS program models/views for compliance with the National Defense Authorization Act (NDAA), such as the Systems Evolution View, SV-8.

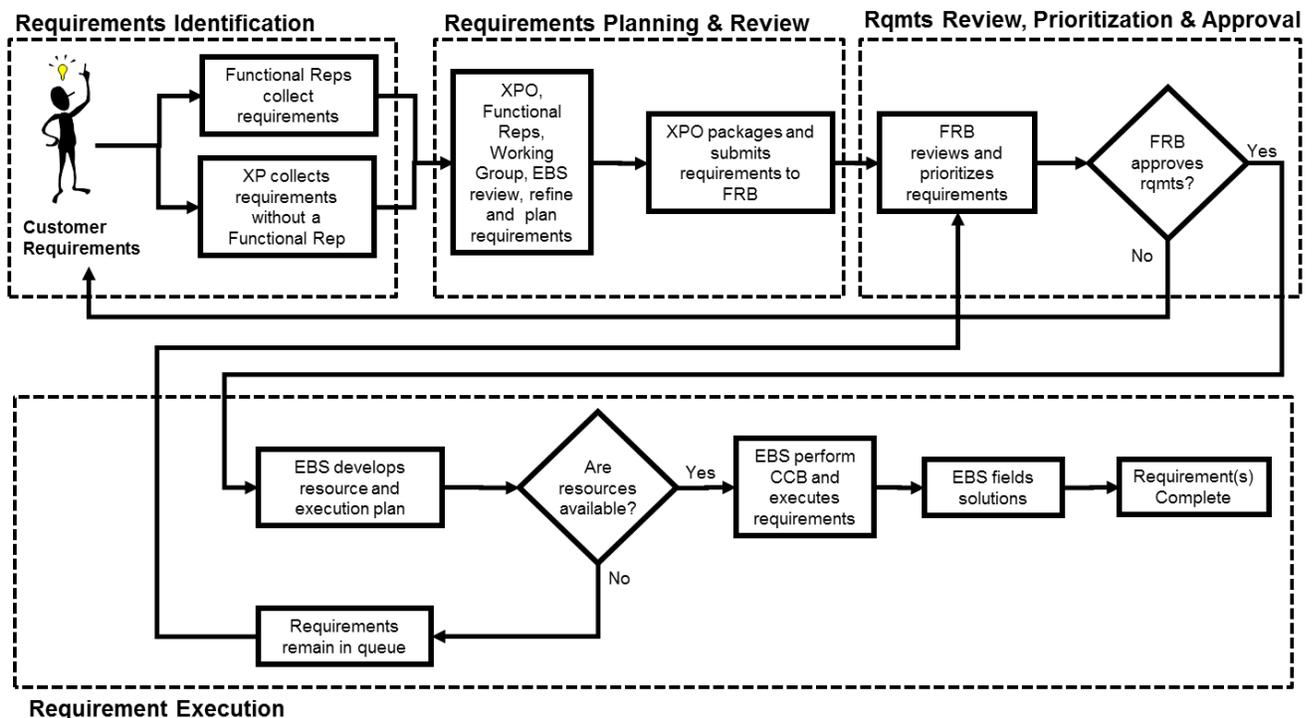
2.4.7. Maintains data in the USAF Enterprise Mission Assurance Support Service (eMASS) to ensure compliance with certification and accreditation requirements.

2.4.8. Maintains clearing house of externally developed capabilities.

2.5. **EBITR Functional Review Board (FRB).** The FRB consists of representation from all Technology Directorates/711th Human Performance Wing Deputy Directors or Corporate Information Officers (CIOs) and HQ Senior Center Functionals. The FRB validates, prioritizes, and approves needs and/or requirements for execution based on enterprise relevance and alignment with the current budget and EBS Strategic Plan.

3. **Process.** The EBITR process is initiated with the submission of an AFRL business requirement by a government employee. The EBITR IPT refines the need and estimates overall business value. Once the business value is identified, the Functional Review Board (FRB) vets requirements. The EBS PMO receives prioritized requirements for lifecycle planning and resource allocation for future EBS system release delivery. **Figure 1** depicts this process. The EBITR process uses the following steps to properly manage requirements.

Figure 1. EBITR Overview



3.1. **Requirement Identification.** The specification and submission of business automation requirements for implementation consideration at the enterprise level within EBS.

3.1.1. The AFRL Community (e.g., AFRL users, functional area representatives, capability champions, and others as applicable) may submit business capability requirements at any time. Submissions may be a concept, requirement, or capability. The characteristics of a good requirement identified in paragraph 1.1 should be considered for all submissions. Characteristics not achieved as part of the submission will be addressed

during development of the FRS in the Requirements Planning and Review activity ([paragraph 3.2](#)).

3.1.2. The submissions may be related to previously submitted requirements, enhancing existing functionality, or a new requirement.

3.1.3. The submission should identify and describe requirements by providing a title, description, reason for proposing the requirement as an enterprise solution, efficiencies. The FRB member from the directorate submitting the requirements will validate submission.

3.1.4. A SharePoint site is available to submit the information (<https://cs2.eis.afmc.af.mil/sites/1548/EBITR/Lists/Sub>). The site provides samples to guide requirement creation. Information collected using this site becomes the basis for the Functional Requirements Specification (FRS) developed collaboratively during the Requirements Planning and Review step ([paragraph 3.2](#)). All AFRL government personnel have access to the site using the CAC e-mail certificate.

3.2. Requirements Planning & Review. The initial analyses to identify, describe, and document individually submitted requirements into defined functional capabilities forming the foundation of a FRS.

3.2.1. The FRS is an integrated capability plan prepared by a collaborative group consisting of a capability champion, functional area representatives, EBS PMO, and AFRL/XP. Proposed capabilities described in a FRS must be based on AFRL community provided inputs and reviews. Review boards, IPTs, and/or working groups should define functional requirements and associated business value to facilitate awareness and acceptance both laterally and vertically within the enterprise. The level of detail documented in the FRS required to qualify a requirement is scope dependent. For example, changing the name of an existing field, or adding a data element to a report does not require lengthy descriptions, justification, or a BCR. However, a new automated capability does require a level of detail and due diligence to support the investment decision.

3.2.2. Requirements should describe their enterprise value by: detailing clear and concise descriptions of functions and features (requirements); current and future process descriptions; benefits to stakeholders and users (customers); expected improvements to the enterprise, both quantitative and qualitative where practical (e.g., man-hour savings); estimated efficiencies; high-level implementation schedules; and estimated hours for development and implementation to include resource options.

3.2.3. A critical component in determining business value of a defined requirement is the benefit/cost ratio (BCR). The BCR is the man-hour savings divided by the hours to implement over one year. Note: BCR does not represent Return On Investment (ROI) which is normally calculated over a three year period. Subject matter experts (e.g., Submitter, Requirements Champion, Functional Area Representative) provide the man-hour savings estimate which must include the rationale for calculating the BCR value. The EBS PMO estimates hours required to implement the need. Each requirement should include a BCR; however, individual requirement BCRs may be rolled up to a higher level for presentation to the FRB. In addition to quantifiable measures (i.e., man-hour cost

avoidance and total planned hours to implement), other tangible aspects such as data integrity, higher headquarters directives, or policy changes can be included to justify business value.

3.2.4. Once sufficiently documented in a FRS and coordinated within working groups, the requirement along with other requirements are packaged and prepared for FRB review and prioritization. Note: A FRS may include proof of concept or prototype documentation to allow requirements vetting and approval by the enterprise via the EBITR process.

3.3. Requirements Review and Prioritization. The FRB reviews, accepts, and prioritizes defined requirements for the enterprise.

3.3.1. Requirements Review. AFRL/XP submits completed FRSs and/or requirements defining future EBS implementations to FRB members three (3) weeks prior to a scheduled FRB review. This allows one (1) week for enterprise review and coordination, one (1) week for addressing questions, and one (1) week for updating the FRS and/or requirements for presentation during the formal FRB.

3.3.1.1. Defined requirements must be applicable and beneficial to the enterprise, as well as compatible with EBS Strategic Plan.

3.3.1.2. Defined requirements must not be duplicative to existing capabilities provided by EBS or AF mandated systems.

3.3.1.3. Defined requirements must not violate governing policy or processes.

3.3.2. Requirements Prioritization. FRB requirements prioritization considers a variety of factors to include but not limited to; relevancy to the enterprise, alignment to EBS strategic planning, and business value. The FRB determines whether to pursue a proposed requirement as an enterprise development initiative, and rank orders (1 thru N) all new and previously submitted capabilities. The Functional Area Representative may prioritize and document a defined capabilities functional requirement in the FRS for review and concurrence by the FRB. (Note: Requirements with less than 40 hours to implement are not vetted by the FRB).

3.4. Requirement Approval. The EBS Strategic Plan establishes the focus areas (e.g., capability gaps, future goals & objectives), or scope, to be funded and deployed in the upcoming fiscal years. Identified enterprise requirements and future requirements provided by the enterprise via the EBITR process support the approval process conducted by the FRB in meeting the agreed upon areas of focus for a given fiscal year.

3.4.1. For the current fiscal year, the EBS Strategic Plan identifies the approved concentration areas. These serve to inform the development of functional baselines consisting of accepted requirements supporting future EBS development releases.

3.4.2. The EBITR FRB proposes functional baselines for future EBS development releases and delivers them to EBS PMO for development consideration.

3.5. Requirement Execution. Consists of the resource allocation required to deliver approved release requirements and monitor implementation progress.

3.5.1. Resource allocation reconciles EBITR-prioritized requirements and Corporate approved requirements against available development resources, dependencies, and constraints. The end goal is to optimize the highest ranked priorities and other previously scheduled work into release options providing significant value to the enterprise within an optimal timeframe.

3.5.2. For the current fiscal year, the EBS PMO analyzes proposed EBITR FRB functional baselines through their Configuration Control Board process to verify resource allocation and schedule obligations thereby formulating the final (approved) allocated and product baselines for the subsequent EBS development release.

3.5.3. If scheduling options do not meet enterprise expectations, then negotiation of schedule trade space occurs between EBS PMO and identified functional area representative(s).

3.5.4. Release updates resulting from implementation deviations are communication to AFRL/XP for communication with the FRB as necessary.

THOMAS J. MASIELLO,
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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

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Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AFMAN—Air Force Manual

AFMCPD—Air Force Materiel Command Policy Directive

CIO—Chief Information Officer

EBITR—Enterprise Business Information Technology Requirements

EBS—Enterprise Business System

eMASS—Enterprise Mission Assurance Support Service

FRB—Functional Review Board

FRS—Functional Requirement Specification

GAT—Government Acceptance Testing

IAW—In Accordance With

IT—Information Technology

NDAA—National Defense Authorization Act

OPR—Office of Primary Responsibility

PMO—Program Management Office

RDS—Records Disposition Schedule

RM—Records Manager

ROI—Return On Investment

SCR—Software Change Request

SRS—Software Requirements Specification

TD—Technology Directorate

XP—Plans and Programs Directorate

Terms

Benefit/Cost Ratio— The relative value of implementing a requirement as calculated by comparing the estimated benefit to the cost to implement. This value does not represent return on investment (ROI) which is normally calculated over a three year period. The standard period for expressing the benefit is one (1) year.

Enterprise Business System— The EBS is a business mission system providing the Information Technology (IT) implementation of the Air Force Research Laboratory's (AFRL) centralized business processes. It is comprised of a highly integrated set of interactive tools for the entire spectrum of AFRL's business and management processes.

Functional Baseline (FBL)— The initial technical baseline documenting a capability or requirement's performance, interoperability and interface characteristics. It is traceable IAW

defined configuration management procedures. In the case of EBITR, the FBL is approved by the FRB.

Proof Of Concept / Prototype— A demonstration whose purpose is to verify that certain concepts or theories have the potential for real-world application. A proof of concept may be as simple as a PowerPoint presentation that shows how a user interface is envisioned to operate, or as complex as a prototype representing a more realistic operational capability. Both are designed to determine feasibility, but do not represent deliverables. These typically occur prior to a production build or roll-out of a major capability.

Software Change Request— Request for new functionality or service.

Telelogic— Commercial-Off-The-Shelf (COTS) software used to capture and manage SCRs.