

**BY ORDER OF THE COMMANDER
96TH TEST WING**

**96TH TEST WING INSTRUCTION
63-100**



31 AUGUST 2017

Acquisition

**IMPLEMENTING LIFE CYCLE
SYSTEMS ENGINEERING FOR
IMPROVEMENT AND
MODERNIZATION (I&M) PROJECTS**

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This 96th Test Wing Instruction (96TWI) implements AFI 63-101/20-101, *Integrated Life Cycle Management*, AFMCI 63-1201, *Implementing Operational Safety, Suitability and Effectiveness (OSS&E) and Life Cycle Systems Engineering (LCSE)*, and AFTCI 63-100, *Life Cycle Systems Engineering of Test Capabilities and Infrastructure*. This instruction's main goal is to effectively manage the 96 TW development of new test capabilities and ensure test capabilities are effectively sustained. This instruction is subordinate to the AFTCI 63-100 and applies to Test and Evaluation (T&E) enterprise Improvement & Modernization (I&M) Test Investment Planning and Programming (TIPP) projects only. The primary purpose of this instruction is to ensure disciplined systems engineering (SE) processes and principles are applied across all phases of a TIPP-funded project over its life cycle, assign 96 TW responsibilities, and follow the guidance of the overarching AFTCI 63-100. This instruction provides the guidance to ensure TIPP project SE processes are properly managed and receive the appropriate level of oversight. Per AFTCI 63-100, SE processes are to be documented in an instruction and implementation of SE processes ensured. In addition, documentation of project-unique SE processes are to be in an approved System Engineering Plan (SEP), Acquisition Plan (AP), or similar document. All "shall statements" in this instruction are mandatory unless waived. All requests for waivers to this 96TWI should be submitted to the Office of Primary Responsibility (OPR), 96 TW/CT. In addition, all "should statements" are recommendations; and therefore are not considered mandatory. Refer recommended changes and questions about this publication to the OPR using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. 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).

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1. Introduction. Per AFMCI 63-1201, 96 TW Improvement and Modernization (I&M) projects' systems engineering (SE) processes must be documented in an instruction and implementation of SE processes must be ensured. This instruction outlines responsibilities and processes dealing with the development and maintenance of the Program Management Plan (PMP) as applicable to I&M Test Investment Planning and Programming (TIPP) projects only. It applies to all 96 TW organizations responsible for the execution of TIPP projects. For investment projects funded by the Office of the Secretary of Defense (OSD) Central Test and Evaluation (T&E) Investment Program (CTEIP), follow the documentation guidance in the *CTEIP Joint Improvement and Modernization (JIM) Projects' Planning and Execution Guide (PEG)*. TIPP and CTEIP projects have been established through AFI 99-109.

1.1. Systems Engineering (SE) . As defined in AFMCI 63-1201, SE “comprises the scientific, technical, and managerial efforts needed to define/refine requirements, develop, test, verify, deploy, support, sustain and dispose of a product, platform, system, or integrated System-of-Systems/Family-of-Systems (SoS/FoS) capability to meet user needs.” SE may be referred to as a discipline, a methodology, an approach, a practice, a process, a set of processes and sub-processes, or various other terms; however, its fundamental elements – systematic technical and managerial processes and measurements – remain the same regardless of the collective nomenclature. SE provides the integrating technical and managerial process to define and balance performance, cost, schedule, risk, supportability, and security for an item, system, and SoS/FoS throughout their life cycle. SE requires an interdisciplinary execution approach. For I&M projects, the elements of focus are requirements definition/evolution, procurement, and integration into test support infrastructure.

1.2. System Engineering Plan (SEP) . SEP requirements are defined in the AFMCI 63-1201. The information tailored to the program life cycle phase to meet these requirements are contained within the PMP for TIPP projects. The PMP shall describe the technical approach utilized by TIPP projects. For reference, the “I&M PMP Template” for 96 TW TIPP projects is located on the 96 TW Strategic Investments SharePoint site. Figure 1. Provides a mapping of systems engineering acquisition life cycle processes to the appropriate paragraph reference in the PMP.

Figure 1. SE Life Cycle Processes mapped to Program Management Plan.

SE Life Cycle Processes	Test Investment Programming and Planning
Requirements	<ul style="list-style-type: none"> • Documented in Technology Development and Acquisition Program (TDAP) Database <ul style="list-style-type: none"> - Includes Need and Solution - Impact if not Funded - Requirements - Schedule - Analysis of Alternatives • Documented in Program Management Plan 1.2 - Need/Requirement
Project Planning	<ul style="list-style-type: none"> • Documented in Program Management Plan <ul style="list-style-type: none"> 4.1 - Project Organization 6. - Funding and Spend Plan 7. - Schedule
Design	<ul style="list-style-type: none"> • Documented in Program Management Plan <ul style="list-style-type: none"> 1.3 - Technical Approach <ul style="list-style-type: none"> 1.3.1 - Key Technical Concepts 1.3.2 - Schematics, Graphics and Illustrations 1.3.3 - Design Approach
Configuration Management	<ul style="list-style-type: none"> • Documented in Program Management Plan 4.2.2 - Performance Baseline Control
Decision Analysis	<ul style="list-style-type: none"> • Documented in Program Management Plan <ul style="list-style-type: none"> 2.1 Limitations and Constraints <ul style="list-style-type: none"> 2.1.1 Technical Feasibility 2.1.2 Schedule Criticality 2.2 Other External Factors
Risk Management	<ul style="list-style-type: none"> • Documented in Program Management Plan <ul style="list-style-type: none"> 2. Critical/Key Issues <ul style="list-style-type: none"> 4.5 Risk Management <ul style="list-style-type: none"> 4.5.1 Risk Elements 4.5.2 Risk Mitigation • Cost, Schedule and Performance Risks are also tracked in monthly reports provided to AFMC
Technical Management and Control	<ul style="list-style-type: none"> • Documented in Program Management Plan <ul style="list-style-type: none"> 4.2 Technical Management <ul style="list-style-type: none"> 4.2.1 Trade Studies
Verification and Validation	<ul style="list-style-type: none"> • Documented in Program Management Plan <ul style="list-style-type: none"> 4.2.3 Critical Testing 5. Activation and Test
Sustainment	<ul style="list-style-type: none"> • If applicable to the specific program, documented in Life Cycle Support Plan
Manufacturing	<ul style="list-style-type: none"> • Not Applicable to TIPP Programs

1.3. **Organization and Project Applicability.** This instruction applies to all 96 TW organizations that are proposing, planning, executing, and reporting on TIPP projects.

1.4. **Approach for Instruction Updates.** The 96 TW/XPT shall review this instruction biennially by 30 October to ensure it complies with applicable policies, and it continues to contain the appropriate content and activities for the 96 TW's TIPP projects. Any changes to the instruction shall be vetted through the wing Technical Authority (TA). The staff coordination sheet should include, but not be limited to 96 TW Technical Review and Assessment Board (TRAAB) members and 96 TW group Technical Directors/Advisors.

2. Engineering Accountability.

2.1. **Technical Authority and Organizational Responsibilities.** As designated by AFTC/CC Memorandum, the 96th Test Wing Technical Director (96 TW/CT) is delegated the responsibilities of wing TA.

2.2. Roles and Responsibilities:

2.2.1. 96 TW Commander shall:

2.2.1.1. Assign 96 TW/CT, the 96th Test Wing Technical Director, as the Wing Technical Authority.

2.2.1.2. Advocate for resources necessary to conduct and sustain effective and efficient SE processes, tools and procedures for 96 TW test capabilities and infrastructure.

2.2.1.3. Implement an Organizational SE Operating Instruction (OI) consistent with AFTC, AFMC, and other AF Instructions; approve Organizational SE OI.

2.2.1.4. Assign 96 TW/CT as the TRAAB Chairman, responsible for the oversight of 96 TW development projects across multiple mission support areas.

2.2.2. 96 TW Technical Authority (TA) shall:

2.2.2.1. Establish a governing body to administer implementation of organizational SE processes for all 96 TW TIPP projects; approve SE process, tailoring as necessary.

2.2.2.2. Ensure each 96 TW group and/or designated squadrons, which manage TIPP projects, follow this instruction.

2.2.2.3. Ensure 96 TW SE processes and documents (instructions and procedures) are reviewed at least once every two years following their implementation or publication, and updated as required.

2.2.2.4. Keep the 96 TW workforce current with respect to evolving policies and guidance spanning the processes in this instruction.

2.2.2.5. Ensure that Critical Program Information (CPI) is identified and protected IAW AF and 96 TW CPI policy and procedures.

2.2.3. The Technical Review and Assessment Board (TRAAB) shall:

2.2.3.1. Be comprised of Steering Committee Voting Members, Advisory Members and General Membership as outlined in the TRAAB Charter.

2.2.3.2. Review and assess proposed needs and solutions to ensure they meet the requirements of the 96 TW T&E Enterprise (reference AFI 99-109). In addition the TRAAB will also hold periodic reviews of the investment portfolio.

2.2.3.3. Prioritize all 96 TW TIPP projects.

2.2.4. 96 TW Plans and Programs Office (96 TW/XP) shall:

2.2.4.1. Provide management and oversight of internal needs and solutions archives, monitor DoD funding calls, provide guidance to 96 TW groups, and coordinate the TRAAB review process.

2.2.4.2. Provide specific guidance on format requirements and assist, as needed, in the development of all deliverables identified in sections 2.2.5. and 2.2.6.

2.2.4.3. Provide assigned Project Manager (PM) with project management support, as needed, for funded TIPP projects.

2.2.4.4. Act as the “Single Face to Customer” I&M lead for the 96 TW capability investment needs by serving as the primary point-of-contact and information repository for 96 TW investments.

2.2.5. 96 TW groups which may have TIPP projects shall:

2.2.5.1. Follow the TIPP process shown in Figure 2 in order to obtain approval for a funded TIPP project.

2.2.5.1.1. Identify T&E Capability Gaps and submit as a need through the TIPP process.

2.2.5.1.2. Develop solutions for those needs selected for Solutions Development and submit through the TIPP Process.

2.2.5.2. Assign a PM for each 96 TW TIPP project under group control once a TIPP project is approved by AFMC/A3F.

2.2.6. The Project Manager (PM) shall:

2.2.6.1. For AFMC/A3F approved TIPP projects, develop a PMP [and Life Cycle Support Plan (LCSP), if applicable per AFMC/A3F] for each TIPP project assigned.

2.2.6.1.1. The PMP for projects starting their first year of funding shall be approved a minimum of 30 days prior to the beginning of the fiscal year in which funding is anticipated. In addition PMPs for existing projects shall be updated annually by 30 October.

2.2.6.1.2. Project baseline requirements as documented in the Capability Source Document (CSD) and Technology Development & Acquisition Program (TDAP) database shall be vetted and approved by all stakeholders (i.e., test engineers, facility or site engineers, operators and maintainers) utilizing each group’s internal formal requirements review process.

2.2.6.1.3. Establish a Configuration Management Plan, ensure an initial technical baseline is established immediately following requirements approval, and ensure it is updated as changes occur. The Configuration Management Plan should be either documented or referenced in the PMP.

2.2.6.1.4. Form a team that consists of a PM or Test Engineer (TE), Subject Matter Experts (SME), an Operations and Maintenance (O&M) representative, and additional support personnel as required. Based on the size and complexity of the project, these roles may be combined.

2.2.6.1.5. Lead the project team and allocate requirements to specific contract actions as needed. For each contract action, the PM shall coordinate with contracting and the appropriate support personnel to agree on the approach for each required acquisition.

2.2.6.1.6. Acquire the goods and services required to support the project. The PM shall provide the Contracting Officer (CO) a complete acquisition package, including an approved Acquisition Plan (as required), to procure required goods and services. The PM and contracting officer shall cooperatively define the total contents of the package.

2.2.6.1.7. Ensure technical representatives from the appropriate functional and test facility organizations have necessary insight and input into design and implementation activities. For design being performed by contractors, the PM and TE shall ensure the appropriate level of reviews and reporting are prescribed in the contract. The test facility organization shall support all project reviews with the necessary technical oversight.

2.2.6.1.8. Ensure in-house design activities are documented in the PMP.

2.2.6.1.9. Ensure technical representatives from the appropriate functional and test facility organizations have necessary insight and input into verification and validation (V&V) activities. For design and development being performed by contractors, the project team shall ensure the appropriate level of V&V activities (specifying government involvement where necessary) are prescribed in the contract.

2.2.6.1.10. Ensure the necessary certifications and accreditations are accomplished to operate the system. These include, but are not limited to: physical security, force protection, information assurance and safety.

2.2.6.2. Coordinate, if applicable, with Environmental Management to ensure compliance with all environmental regulations.

2.2.6.3. Coordinate, if applicable, with the local Senior Intelligence Officer to determine intelligence support requirements, identify deficiencies and associated mitigation strategies.

2.2.6.4. Implement protective countermeasures per the existing Program Protection Plan (PPP), if CPI has been inherited or previously identified. If CPI has not been inherited or previously identified, the PM shall execute the CPI checklist in Attachment 2 to identify and protect their project's CPI. Reference DoDI 5200.39,

DoD 5200.1-M, AFPD 63-1, and AFI 63-101/20-101 for further guidance on the program protection planning process and critical program information. Plans to protect CPI shall be documented in the PMP.

2.2.6.5. Develop, document, and implement an “exit strategy” for completion of the TIPP project and transition into sustainment. This should be documented in either the PMP or LCSP, and should include a funding plan for any future training, operations, and maintenance requirements.

3. Systems Engineering Processes in the 96 TW.

3.1. **Systems Engineering Process Self-Assessment.** The 96 TW TA shall ensure that a self-assessment of the organizational SE processes is conducted at least annually using the *AF Systems Engineering Assessment Model (AF SEAM)* as a guide and tailored as appropriate. The assessment should be conducted on no less than three (3) projects, to include one project amount to at least \$500,000 in total development costs. The combined assessment shall not be any lower than the group level.

3.2. **Level of Applicability.** The SE processes are listed below, which correspond to those listed in the *AF SEAM*. Each is identified as to level of applicability in the 96 TW.

3.2.1. **Project Planning.** Project planning begins when a TIPP project is approved and programmed by AFMC/A3F. Project planning is documented in the PMP by the Project Manager. At the onset of project planning, the process and documentation requirements shall be tailored to ensure the proper level of oversight and management is being applied to each TIPP project. The 96 TW TA shall ensure all projects amounting to or exceeding \$500,000 in total development costs are properly documented with a PMP.

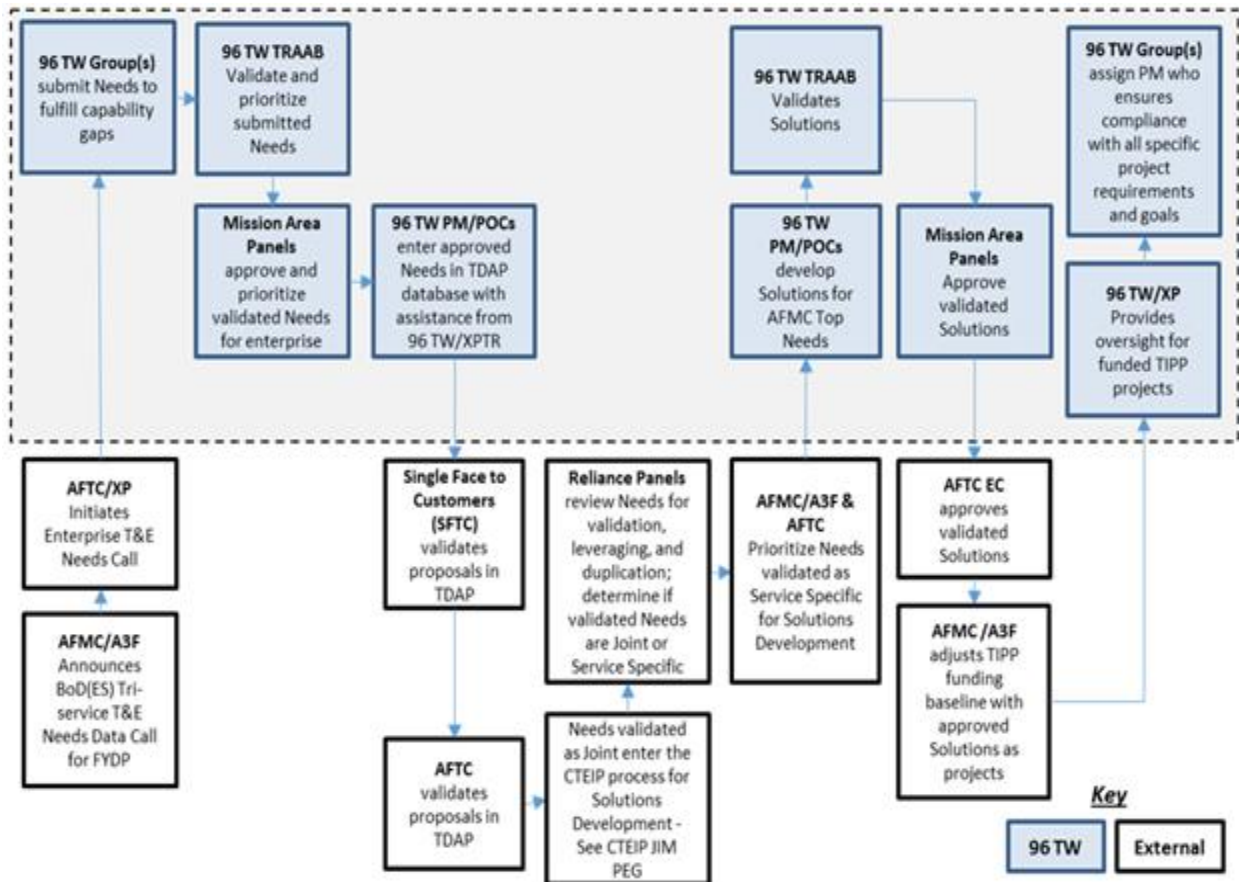
3.2.1.1. **Program Management Plans (PMP).** PMPs shall be completed a minimum of 60 days prior to project start. Additional documentation may be developed as required by AFMC or as deemed necessary by the Project Manager. The PMP documentation shall be developed utilizing the PMP template provided by AFMC/A3F. The PMP shall be revalidated at least annually by the wing TA, or whenever a change to the project execution is necessary.

3.2.1.2. **Work Breakdown Structure (WBS).** WBS codes are used to plan and track cost, schedule, and technical performance criteria.

3.2.2. **Requirements Management.** Requirements shall be traceable back to approved assessment of existing capability documented in the CSD and the TDAP database. If at any time during the test capability development it is determined project objectives cannot be met, new project objectives must be approved via the needs and solutions process. Requirements are documented in the Air Force Test Center CSD, AFMC TDAP database and the PMP.

3.2.3. **96 TW TIPP Process.** Figure 2. details how the 96 TW will implement the process.

Figure 2. 96 TW TIPP Process.



3.2.3.1. **Identify Needs.** Needs are requirements based on current testing shortfalls and priorities using AFMC/A3F strategic guidance. The specific I&M Program Element Codes (PEC) are defined in AFI 99-109. Therefore, the Needs and Solutions (N&S) should correspond to one of the established I&M specific PECs.

3.2.3.2. **Identify Needs.** Needs are requirements based on current testing shortfalls and priorities using AFMC/A3F strategic guidance. The specific I&M Program Element Codes (PEC) are defined in AFI 99-109. Therefore, the Needs and Solutions (N&S) should correspond to one of the established I&M specific PECs.

3.2.3.3. **Maintenance and Review of Investment Requirements.** 96 TW Groups determine, develop, and prioritize requirements internally and submit requirements to the 96 TW/XPTR Planning Office.

3.2.3.3.1. **I&M Cycle (Odd Fiscal Years).** The TRAAB shall prioritize the proposals and ensure mission objectives, test customer requirements, and planned operations are satisfied. 96 TW/XPTR Planning Office shall assist the Project Managers in populating the approved proposals into the Services’ TDAP database application and serve as the Single Face to Customers (SFTC). SFTCs shall validate the proposals in the TDAP database and brief AFMC/A3F and the Enterprise Working Group. Reference Attachment 3 for a typical 96 TW I&M schedule.

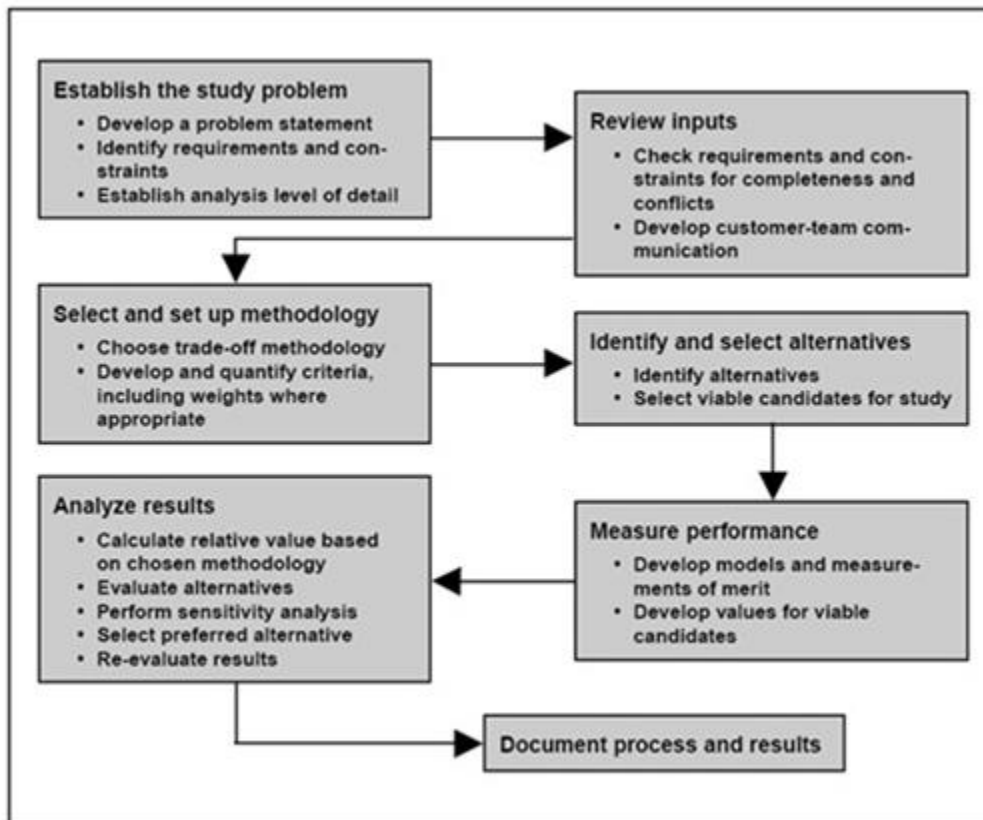
3.2.3.4. **Funded Projects** . 96 TW groups assign a PM who ensures compliance with all specific project requirements and goals.

3.2.4. **Design and Implementation.** 96 TW TIPP project teams described in 2.2.6.1.4. shall work together to create an overall acquisition strategy, product support approach, and the technical management processes and incentives to ensure design and sustainment objectives are met. Design is an iterative process that begins with examining current test capability gaps, analyzing various alternatives, and determining integration opportunities for Commercial Off-The-Shelf (COTS) and Government Off-The-Shelf (GOTS). Implementation activities include system development, integration, and installation.

3.2.5. **Decision Analysis.** Decision Analysis for I&M projects is initially conducted through an analysis of alternatives, as performed in the identification of needs and solutions phase of the investments process. Needs and solutions are validated by the 96 TW TIPP Process shown in Figure 2. If applicable, alternative solutions shall be identified and documented in the TDAP database. Trade study results shall be documented in the PMP as well.

3.2.5.1. **Decision Analysis Process** . The Decision Analysis process includes: guidelines for when to use the formal decision analysis process, criteria for evaluating alternatives, and analysis of alternatives. A more detailed description of a sample Decision Analysis process is described in Figure 3.

Figure 3. A Sample 96 TW Trade Study Process.



3.2.5.2. **Guidelines for When to Use the Formal Decision Analysis Process.** The formal process should be used early on in the Project Planning phase, or when a significant change in the project's risk posture occurs.

3.2.5.3. **Criteria for Evaluating Alternatives.** For each decision, the Project Manager should establish and maintain the criteria for evaluating alternatives, the ranking of the criteria, and select the evaluation methods. Costs, risks, and technology limitations are just a few of the typical criteria that should be used.

3.2.5.4. **Analysis of Alternatives.** Alternatives that are considered should be documented along with any rationale for the rejection of alternatives in TDAP during the N&S identification.

3.2.6. **Technical Management and Control.** Technical management and control begins when a proposed TIPP project is approved by an authorized funding authority and continues until the project is transitioned to a receiving test facility organization. It includes management and control of the project's cost, schedule, and performance. Technical Management and Control of the projects are reported on throughout the FY. These reports include, but are not limited to, monthly status reports and Quarterly/Mid-Year Reviews as required by 96 TW, AFTC and AFMC/A3F. Execution of the project plan will be monitored throughout the FY via monthly status reports provided to AFMC utilizing the Comprehensive Cost and Requirement (CCaR) system tool. Project decisions will be documented in the monthly status reports as well as the PMP during annual update. A metric used to capture TIPP project status is obligations and expenditures versus the OSD goals. Test plans and objectives are formulated based on project requirements. The 96 TW TA shall conduct periodic reviews, no less than once per year, of the wing's projects, or whenever a change to the project baseline is necessary.

3.2.7. **Risk Management.** Risk Management is performed by the designated Project Manager and documented in the PMP. Each TIPP project shall have a risk management plan which describes the approach for identifying, analyzing, mitigating, tracking, and controlling technical performance, cost and schedule risks. Risk management should include, but is not limited to risk identification, risk analysis, risk mitigation, and risk tracking. Status of critical risk areas shall include, at a minimum cost, schedule, and technical performance as defined in the risk management plan. In addition, critical risk areas shall be updated in monthly project status reports and Program Management Reviews (PMR). All TIPP projects shall use the Risk Reporting Matrix standard format for evaluation and reporting of program risk assessment findings (reference AFTCI 63-100).

3.2.8. **Configuration Management (CM).** 96 TW organizations, which operate and maintain test infrastructure, shall have a configuration management plan for TIPP projects to describe the process for establishing and maintaining the product's technical baseline. The CM plan shall be documented in the PMP. The minimum requirements for CM, as defined by the *AF SEAM* and AFMCI 63-1201 Attachment 2, should include:

3.2.8.1. Document the configuration management process,

3.2.8.2. Establish or utilize an existing configuration control board,

- 3.2.8.3. Identify the configuration items, maintain configurations items lists,
- 3.2.8.4. Establish and maintain the technical baseline,
- 3.2.8.5. Document changes to the configuration items; maintain change logs, and
- 3.2.8.6. Perform configuration audits to maintain integrity of the configurations baselines.
- 3.2.8.7. **CM Transition.** In order to simplify the transition of a new test capability, a development project shall follow the configuration management plan and processes of the receiving test facility organization.
- 3.2.8.8. **CM Audit.** Prior to system commissioning and transition to sustainment, the TIPP project team and receiving test facility organization shall conduct a joint functional and physical configuration audit. After transition, the receiving test facility organization assumes the responsibility to maintain configuration control.
- 3.2.9. **Data Management (DM).** A structured DM process must be established in accordance with DoDI 8320.02, *Sharing Data, Information, and Information Technology (IT) Services in the Department of Defense*.
- 3.2.10. **Verification and Validation (V&V).** V&V is performed by the designated Project Manager, or by an individual/team designated by the Project Manager, and documented in the PMP. The purpose of V&V is to ensure that the designed solution meets the specified requirements and can demonstrate that the solution fulfills its intended use in its intended environment. Each project shall establish and maintain the overall V&V strategy and plan, including integrated testing approach. The V&V strategy and plan shall be documented in the project PMP.
- 3.2.11. **Sustainment.** Sustainment is addressed in a LCSP document. The requirement for a LCSP is determined by AFMC/A3F and may not be applicable or required by all TIPP projects. Sustainment consists of the maintenance of parts, software/hardware updates/upgrades, security, necessary certifications and accreditations, funding and resources required to operate and maintain the system. Upon completion of TIPP projects, sustainment activities should be properly funded through the Program Objective Memorandum (POM) process.
- 3.2.12. **Manufacturing.** The purpose of TIPP projects is to improve and modernize the testing infrastructure and capabilities of the 96 TW. TIPP projects do not manufacture products to fulfill an identified T&E critical gap. The solution to a TIPP project is either a unique developmental item, custom facility, integration of COTS/GOTS equipment, or a combination. Therefore, manufacturing is not performed by the 96 TW for TIPP projects.

EVAN C. DERTIEN, Brigadier General, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

46 TWP 99-102, *Programming Engineer's Guide*, 1 February 2012

AFI 63-101/20-101, *Integrated Life Cycle Management*, 9 May 2017

AFI 99-109, *Major Range and Test Facility Base (MRTFB) Test and Evaluation Resource Planning*, 5 February 2015

AFMCI 63-1201, *Implementing Operational Safety Suitability and Effectiveness (OSS&E) and Life Cycle Systems Engineering (LCSE)*, 28 March 2017

AFTCI 63-100, *Life Cycle Systems Engineering of Test Capabilities and Infrastructure*, 24 May 2017

AF Systems Engineering Assessment Model (SEAM) Management Guide, 9 September 2014

Central Test and Evaluation Investment Program (CTEIP) Joint Improvement and Modernization (JIM) Planning and Execution Guide (PEG), 19 November 2010

DoD Systems Engineering Plan Preparation Guide, 20 April 2011

DoDI5000.02, *Operation of the Defense Acquisition System*, 2 February 2017

DoDI8320.02, *Sharing Data, Information, and Information Technology (IT) Services in the Department of Defense*, 5 August 2013

DoDI5200.39, *Critical Program Information (CPI) Identification and Protection Within Research, Development, Test, and Evaluation (RDT&E)*, 28 May 2015

DoDI5200.01, *DoD Information Security Program and Protection of Sensitive Compartmented Information (SCI)*, 21 April 2016

AFPD 63-1, *Integrated Life Cycle Management*, 3 June 2016

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

96 TW— 96th Test Wing

96 TW Group— 96th Test Wing Group

96 TW/CC— 96th Test Wing Commander

96 TW/CT— 96th Test Wing Technical Director

96 TW/XP— 96th Test Wing Plans and Programs Office

AF— Air Force

AFRIMS— Air Force Records Information Management System

AF SEAM— Air Force Systems Engineering Assessment Model

AFI— Air Force Instruction

AFMAN— Air Force Manual

AFMC— Air Force Materiel Command

AFMC/A3F— Air Force Materiel Command T&E/I&M Branch

AFMC/EN— Air Force Materiel Command, Engineering and Technical Management

AFMCI— Air Force Materiel Command Instruction

AFPAM— Air Force Pamphlet

AFPD— Air Force Policy Directive

AFTC— Air Force Test Center

AFTC EN— Air Force Test Center Engineering Council

AP— Acquisition Plan

BoD(ES)— Board of Directors (Executive Secretariat)

CCaR— Comprehensive Cost and Requirements

CM— Configuration Management

CO— Contracting Officer

COTS- Commercial-Off-The-Shelf

CPI— Critical Program Information

CSD— Capability Source Document

CTEIP— Central Test and Evaluation Investment Program

DM— Data Management

DoD— Department of Defense

DoDI— Department of Defense Instruction

FoS— Family of Systems

GOTS- Government-Off-The-Shelf

I&M— Improvement and Modernization

JIM— Joint Improvement & Modernization

LCSE— Life Cycle Systems Engineering

LCSP— Life Cycle Support Plan

MAP— Mission Area Panel

N&S— Needs and Solutions

O&M— Operations and Maintenance

OI— Operating Instruction

OPR— Office of Primary Responsibility
OSD— Office of the Secretary of Defense
OSS&E— Operational Safety, Suitability, and Effectiveness
PEC— Program Element Codes
PEG— Planning and Execution Guide
PM— Project Manager
PMP— Program Management Plan
PMR— Program Management Review
POM— Program Objective Memorandum
PPP— Program Protection Plan
SAF/AQR— Secretary of the Air Force – Science, Technology, and Engineering
SE— System Engineering
SEP— System Engineering Plan
SFTC— Single Face to Customer
SME— Subject Matter Expert
SoS— System of Systems
TA— Technical Authority
T&E— Test and Evaluation
TDAP— Technology Development and Acquisition Program
TE— Test Engineer
TIPP— Test Investment Planning and Programming
TRAAB— Technical Review and Assessment Board
TWP— Test Wing Pamphlet
UR— Unfunded Requirement
USAF— United States Air Force
V&V— Verification and Validation
WBS— Work Breakdown Structure

Attachment 2

CRITICAL PROGRAM INFORMATION IDENTIFICATION CHECKLIST

Table A2.1. Critical Program Information Identification Checklist.

Item #	Question	Y, N, or N/A	Comments/Details
1	Has critical program information (CPI) been inherited or previously identified?		
2	If answer to Item #1 is yes, have protective countermeasures per the existing Program Protection Plan (PPP) been implemented?		
3	Has the system been broken down into identifiable subsystems?		
4	Does the capability being developed involve any new or unique technologies that may be transitioned into tactical systems?		
5	Have any information, technologies or resources utilized by the system to achieve a new or unique capability been identified?		
6	If the program information, technology or resource is lost, could the system be killed or made less effective?		
7	If the program information, technology or resource is lost, could the system be countered?		
8	If the program information, technology or resource is lost, could the system be cloned?		
9	If the program information, technology or resource is lost, would the system have to be modified?		
10	If the program information, technology or resource is lost, would it decrease the system's effective lifetime?		
11	Has the PM identified a working group (CPI Committee) consisting of all involved elements, to include the user community (Engineers, Management, Logistics, Production, Security, Contractors, Intelligence, User, etc.)		
12	Has the CPI Committee reviewed all available pertinent documents, i.e.: Initial Capabilities Document (ICD), Capabilities Development Document (CDD), Capabilities Production Document (CPD) Security Classification Guide (SCG) Security Acquisition Management Plan (SAMP) Military Critical Technologies List (MCTL)		
13	Has the PM discussed the following proprietary considerations with the program Contractor? Formulas Algorithms Test Equipment Tools		
14	Has the PM discussed CPI considerations (see item 12) with the User?		
NOTE: If the answer is yes to ANY of items 6-10, then CPI has been identified and a Program Protection Plan must be developed and followed.			

Attachment 3

TYPICAL 96 TW I&M SCHEDULE

Figure A3.1. Typical 96 TW I&M Schedule.

