

The FAA and Industry Guide to Product Certification

- *Safety*
- *Teamwork*
- *Communication*
- *Planning for success*
- *Quality products & services*
- *Accountability at all Levels*



**Prepared by AIA, GAMA, and
the FAA Aircraft Certification Service**

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THE FAA AND INDUSTRY GUIDE TO PRODUCT CERTIFICATION

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INTRODUCTION

Purpose

The FAA and Industry Guide to Product Certification contains a description of the purpose and vision of the improved certification process, hereinafter referred to as Certification Process Improvement (CPI). It also includes an overview of the Phases for product certification including the process flow and a detailed description of Key Player's roles. This is followed by Appendices I and II, which contain models for a Partnership for Safety Plan (PSP) and a Project Specific Certification Plan (PSCP) which are the primary tools of the certification process. Appendix III contains the Project Evaluation Forms used at the end of each Phase of a project to evaluate the effectiveness of the process. Appendix IV is the Glossary and Acronyms.

This Guide describes how to plan, manage, and document an effective, efficient product certification process and working relationship between the Federal Aviation Administration (FAA) and an Applicant. The Guide should be used by the FAA and Applicants for Type Certification, significant Supplemental Type Certification, significant amendments to either TC or STC, and for Production Approval. Though focused on large and/or complex programs, it is expected that the CPI principles of up-front planning, project management, and documenting the certification process and working relationship are applicable to all applicants, large or small.

The FAA and Industry are committed to improving the effectiveness and efficiency of the product certification process by establishing up-front a clear understanding of the needs and expectations of both parties in the product certification process. Reducing the cycle time to certify products, while ensuring regulatory compliance, will require earlier involvement of FAA and Applicants in project planning, open and constructive communication, and safety focused project management. Early involvement helps to identify and resolve the certification basis more efficiently, e.g. means of compliance, special conditions, etc. This process will result in a more effective use of FAA and Industry resources, particularly through the use of FAA Designees with oversight focused on critical safety areas. Also, by reducing the time and cost of product certification, safety enhancements through new technology and design innovation can be more rapidly integrated into aviation products.

Vision

By applying the principles of this Guide, the FAA and Applicants can lay a foundation from which to build mutual trust, leadership, teamwork, and efficient business practices. The processes and products described in this Guide enable the FAA and Applicants to fulfill their respective roles and

expedite certification of products while focusing on safety significant issues. It is the mutual goal of the FAA and Applicants to meet or exceed the following vision:

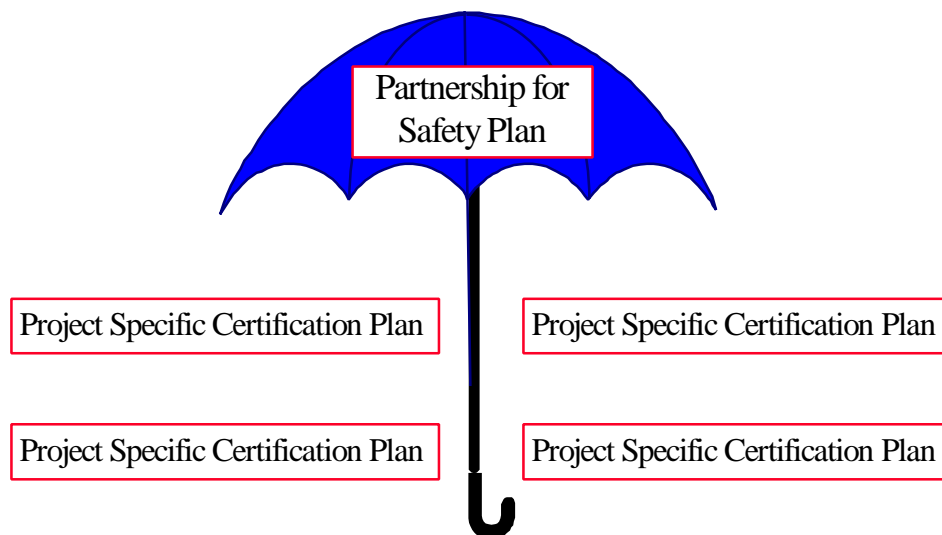
Vision of the Product Certification Process

A credible and concise product certification process that results in:

- Timely and efficient product type design and production approvals
- Clearly defined and understood roles, responsibilities, and accountability of all stakeholders
- Timely identification and resolution of the certification basis, potential safety issues, and business practice requirements
- Optimal delegation using safety management concepts with appropriate controls and oversight

Accomplishing the Vision

The building blocks to bring about the vision of the new certification process are the PSP, the PSCP, and the Project Evaluation Forms. The Plans must be agreed to by both the FAA and the Applicant prior to conducting a certification project. It is important to adhere to the guidance and intent of these documents to the greatest extent possible, focusing on safety and allowing flexibility in other areas where the FAA's and Applicant's work processes and related customer bases may differ. Material contained in this Guide is a model of how to conduct effective process and project management by applying the PSP and PSCP formats found in Appendices I and II respectively. The Plan formats can be adapted and enhanced within the FAA's regulatory and policy requirements to meet the needs and work processes of the FAA and Applicants. However, it is essential that Plans address as a minimum all the areas and issues contained in this Guide. This ensures that each certification project is planned and managed in a way that achieves the maximum benefit of this Guide.



The first Plan to be developed is the PSP shown in Appendix I. This Plan is a written “umbrella” agreement between the FAA and the Applicant that defines generic procedures to plan for product certification, establish the general expectations or operating norms and identify deliverables. The PSP also defines the discipline and methodology to be used in planning and administering subsequent specific certification projects. Examples of content include generic process/procedures for use of Designees, conformity inspections, communication, issue resolution, and generic metrics for measuring project progress.

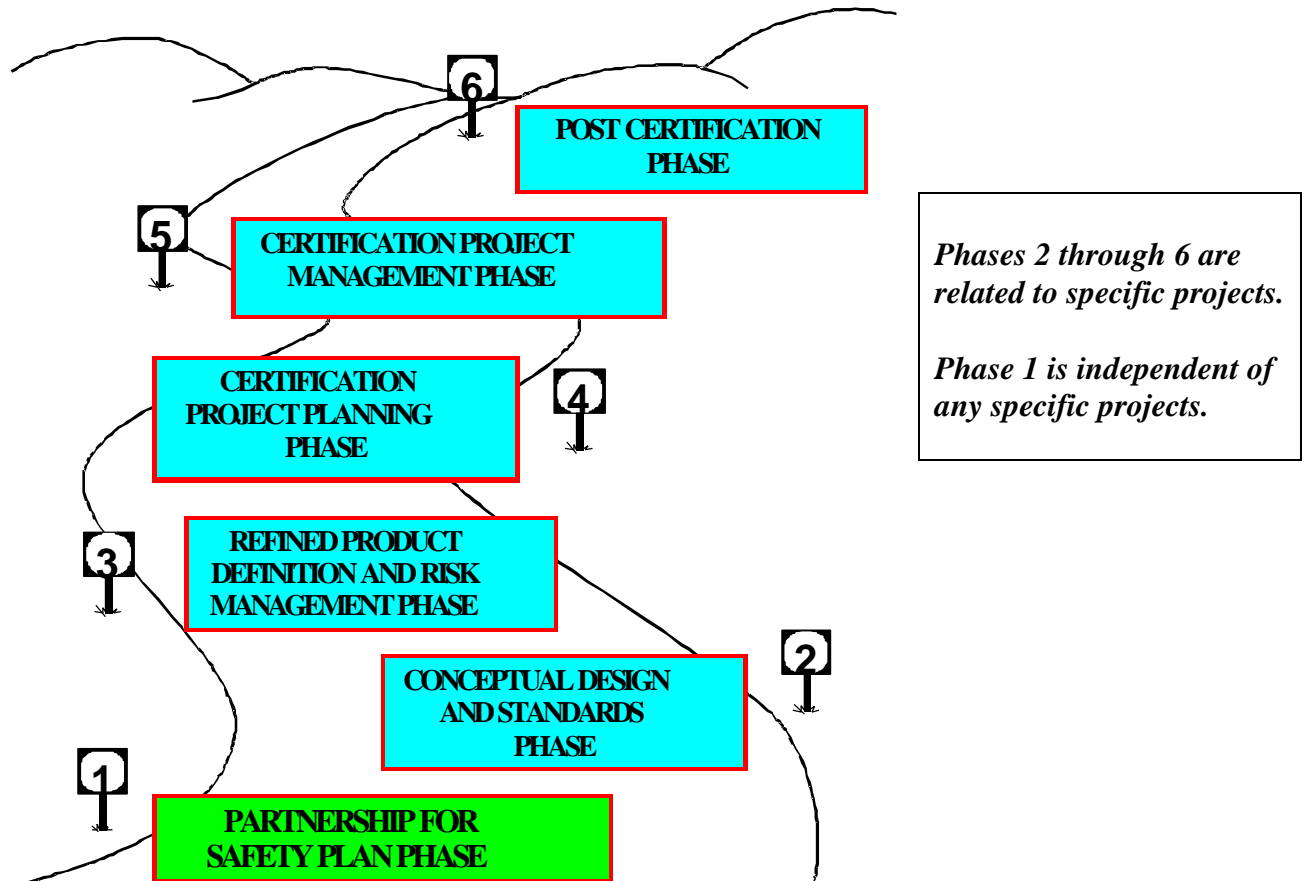
The second Plan is the PSCP shown in Appendix II. It applies the agreed upon principles of the PSP to a specific certification project. Each project will have a PSCP. The PSCP is designed to be used as a project management tool, providing milestones, performance measures, and information unique to a certification project. It takes the generic principles and procedures outlined in the PSP and applies them to specific projects.

The Project Evaluation Forms (Appendix III) are a tool that can be used for project management during each Phase of a product certification project. The FAA and Applicant Project Managers (PMs) should jointly prepare a Project Evaluation Form at the close of each Phase. The PMs are encouraged to include the completion of the Project Evaluation Forms as milestones when preparing their PSCP schedule. To facilitate continuous improvement any necessary corrective actions should be implemented by the Team and the Project Evaluation Forms should be maintained in the official project file for future national or local program evaluation. When the evaluation identifies the need for corrective actions or improvements it should be included as a part of the Compliance Summary Document for future reference.

Overview of Product Certification Phases

There are six Product Certification Phases that move from early project concept and initiation through post certification activities. The content of the PSP and PSCP outlines the FAA and Applicant agreement and operating practices for a Product Certification project. Each Phase is built on early mutual awareness of key certification issues, commitment to planning and managing projects, early identification and resolution of issues and other elements to achieve the aforementioned vision. The six Phases are illustrated below:

PRODUCT CERTIFICATION PROCESS ROADMAP



As one works through the six Phases outlined in this Guide, the new process of extensive up-front engagement of both the FAA and an Applicant becomes evident. The Product Certification Phases shown on the following pages depicts the Key Players in the process, the tasks for each Phase, and the required information, deliverables, and criteria for success. The Key Players' Roles shown later in this Guide also includes the responsibilities, and quality attributes or best practices for teaming, communication, and accountability.

PHASES OF PRODUCT CERTIFICATION

A detailed description of each Phase is contained on the following pages. It includes the Phase's definition, tasks, required information, deliverables, and criteria for success. Deliverables of each Phase are prerequisites before entering the next Phase. ALL of the Key Players outlined below are involved in ALL of the product certification Phases:

- **FAA and Applicant's Management:**
Makes commitment to the PSP and provides leadership and resources.
- **FAA and Applicant's Project Managers:**
Jointly orchestrates the PSCP and apply the PSP agreements.
- **FAA Standards Staff Project Officer:**
Provides timely standardized policy and guidance.
- **FAA Engineers and Designees:**
Applies regulations and policy to find compliance to FAR.
- **FAA Inspectors and Designees:**
Determines conformity and airworthiness.
- **FAA Flight Test Pilots and Designees:**
Conducts FAA flight tests.
- **FAA National Resource Specialists (NRS) and Technical Specialists:**
Provides expert advise and technical assistance.
- **FAA Aircraft Evaluation Group (AEG):**
Evaluates conformance to operations and maintenance requirements.

A more detailed description of the Key Players' roles appears in the "Key Players' Roles" section of this Guide.

Each Phase of product certification described in the following pages identifies certain "Criteria for Success" that are unique to that Phase. The following is a list of Criteria for Success applicable to ALL Phases that must be embedded in both the FAA's and Applicant's culture to assure a successful process:

- ☞ Establish mutual trust
- ☞ Ensure confidentiality
- ☞ Meet all commitments
- ☞ Emphasize empowerment
- ☞ Maintain open and timely communication
- ☞ Provide proper levels of technical project and management leadership with frequent reviews to ensure all are aware of project status, significant issues, and commitments
- ☞ Conduct early familiarization meeting(s) and document accordingly

- ☞ Conduct meeting(s) using well structured agendas/presentations, ensure Key Players attend, and document agreements, issues and actions accordingly
- ☞ Agree to clear time frames, expectations, and action plans to accomplish all Phases
- ☞ Produce timely, high quality documentation of decisions, agreements, schedules, milestones, action item assignments, compliance/conformance submittals, and approvals

PHASE I: PARTNERSHIP FOR SAFETY PLAN

This is a written agreement that states how the FAA and Applicant will conduct product certification, establish the general timelines and expectations, and identify deliverables. The agreement defines the generic discipline and methodology to be used in early exchange of information to plan for successful certification projects. It includes project schedule milestone development, generic delegation procedures, conformity procedures, communications protocol, an issues resolution process, and the generic operating norms for developing metrics for project evaluation.

Tasks

- ☞ FAA and Applicant training on certification process
- ☞ FAA and Applicant meetings on conduct and procedures

Required Information

- ☞ *The FAA and Industry Guide to Product Certification*
- ☞ Existing approvals/authorizations
- ☞ Relevant experience
- ☞ FARs, guidance, policy
- ☞ Delegations and procedures
- ☞ Applicant's procedures

Deliverables

(Deliverables are prerequisites for subsequent Phases and must be completed before entering the next Phase, unless otherwise mutually agreed by the FAA and the Applicant.)

- ☞ Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments
- ☞ Signed PSP (See Appendix I)
- ☞ Project Evaluation Form (See Appendix III)

Criteria for Success

- ☞ Provide proper levels of management leadership
- ☞ Commit to securing agreement on all elements of the PSP and subsequent PSCPs

PHASE II: CONCEPTUAL DESIGN AND STANDARDS

This Phase is initiated when the Applicant begins design concept for a product that may lead to a viable certification project. The intent is to ensure early, value added, joint involvement with an expectation to surface critical areas and the related regulatory issues, and begin formulating a preliminary Project Specific Certification Plan (PSCP). This is an opportunity to apply the PSP principles to develop a mutual understanding of potential new projects.

Tasks

- ☞ Early Familiarization Meetings on design concepts

Required Information

- ☞ New designs, technology, materials, processes, etc.
- ☞ Proposed certification basis and means of compliance
- ☞ Supplier relationships
- ☞ Initial safety assessments

Deliverables

(Deliverables are prerequisites for subsequent Phases and must be completed before entering the next Phase, unless otherwise mutually agreed by the FAA and the Applicant.)

- ☞ Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments
- ☞ Preliminary certification basis considering the intended means of compliance, initial safety assessments, and relevant policy material and begin formulation of a PSCP
- ☞ Definition and plan for resolution of critical issues, e.g. , new designs, technology or processes, potential special conditions, exemptions or equivalent safety findings, co-production or foreign supplier arrangements requiring undue burden assessments; etc., as appropriate
- ☞ Identify core team for commitment to developing the preliminary PSP elements to ensure continuity
- ☞ Project Evaluation Form (See Appendix III)

Criteria for Success

- ☞ Commitment to the signed PSP

PHASE III: REFINED PRODUCT DEFINITION AND RISK MANAGEMENT

Efforts in this Phase clarify the product definition and the associated risks, and conclude with a mutual commitment to move forward with product certification. Specific regulatory requirements and methods of compliance or critical issues are formulated. A more formal PSCP is developed.

Tasks

- ☞ Meetings to refine product definition, requirements, and develop the PSCP
- ☞ Preliminary Certification Board Meeting

Required Information

- ☞ Applicant's descriptive design & production data
- ☞ Critical issues definition
- ☞ Refined safety assessments
- ☞ Proposed schedule

Deliverables

(Deliverables are prerequisites for subsequent Phases and must be completed before entering the next Phase, unless otherwise mutually agreed by the FAA and the Applicant.)

- ☞ Submission of Application, FAA Form 8110-12 (FAA Order 8110.4)
- ☞ Acknowledgment of Application
- ☞ Certification Project Notification (FAA Order 8110.4) and establishment of project
- ☞ Establishment of FAA and Applicant project certification team
- ☞ Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments
- ☞ Preliminary PSCP including project milestones and related events such as program status reviews (See Appendix II)
- ☞ Agreement of TC Certification Basis Plan and definition of project issues such as means of compliance including special conditions, equivalent safety findings, exemptions, etc.
- ☞ Project Evaluation Form (See Appendix III)

Criteria for Success

- ☞ Apply the PSP and commit to the early development of the PSCP

PHASE IV: CERTIFICATION PROJECT PLANNING

During this Phase a PSCP is completed. The plan is a tool to which the responsible parties commit and use to manage the product certification project.

Tasks

- ☞ Project planning and PSCP development meetings

Required Information

- ☞ Initial FMEA/Safety Assessments
- ☞ Stakeholder identification
- ☞ Refined critical issues
- ☞ Production processes

Deliverables

(Deliverables are prerequisites for subsequent Phases and must be completed before entering the next Phase, unless otherwise mutually agreed by the FAA and the Applicant.)

- ☞ Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments
- ☞ Signed PSCP (See Appendix II)
- ☞ Project schedule with established FAA/Applicant milestones for completion of analyses, test plan submission, TIA, conformities, flight test, AEG evaluations, critical issues resolution plan, and other items affecting the completion of the project
- ☞ Agreed Type Certification Basis
- ☞ Compliance Check List
- ☞ Completion of Stage 1 on all issue papers
- ☞ Identification of stakeholders, including suppliers, installers in the case of engines, propellers, or systems, etc.
- ☞ Delegations defined with oversight criteria
- ☞ Resource requirements
- ☞ Conformity procedures
- ☞ Project evaluation measures
- ☞ Project Evaluation Form (See Appendix III)

Criteria for Success

- ☞ Apply the PSP and commit to agreement on the PSCP

PHASE V: CERTIFICATION PROJECT MANAGEMENT

During this Phase the Applicant and FAA work closely in managing, refining, and achieving their agreed PSCP to ensure that all agreed upon product specific certification requirements are met.

Tasks

- ☞ Demonstration of compliance
- ☞ Compliance and conformance requirements verification
- ☞ Final Certification Board Meeting

Required Information

- ☞ Design and production analysis
- ☞ Witnessing
- ☞ Inspection results
- ☞ Safety analysis

Deliverables

(Deliverables are prerequisites for subsequent Phases and must be completed before entering the next Phase, unless otherwise mutually agreed by the FAA and the Applicant.)

- ☞ Meeting minutes and correspondence to document decisions, agreements, and action item assignments
- ☞ Meet milestones for completion of analyses, test plan submission, TIA, conformities, flight test, AEG evaluations, critical issues resolution plan, and other items affecting the completion of the project
- ☞ Completed test plans/reports, conformity requests, inspections, and compliance documentation
- ☞ Issue Papers, Special Conditions, Exemptions, Equivalent Safety Findings
- ☞ Compliance and conformance findings
- ☞ Type Design and Production approval issuance
- ☞ Project Evaluation Form (See Appendix III)

Criteria for Success

- ☞ Apply PSP and manage to the PSCP
- ☞ Conduct frequent project schedule and compliance checklist status reports, team and management reviews, and make revisions as needed to PSCP

PHASE VI: POST CERTIFICATION

During this Phase close-out activities provide the foundation for continued airworthiness activities and certificate management for the remainder of the product's life cycle.

Tasks

- ☞ Project follow-up and closure
- ☞ Certificate Management

Required Information

- ☞ Airworthiness Limitations
- ☞ Maintenance and Operations requirements
- ☞ Project lessons learned
- ☞ Relevant safety data
- ☞ Type Certificate Data Sheet
- ☞ Evaluation findings
- ☞ Design change data

Deliverables

- ☞ Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments
- ☞ Compliance Summary Document
- ☞ Type Inspection Report
- ☞ Instructions for Continued Airworthiness
- ☞ Continued Airworthiness Management Plan
- ☞ Project Evaluation Form (See Appendix III)

Criteria for Success

- ☞ Work together for continuous improvement
- ☞ Apply PSP and manage to the PSCP with a focus on continued operational safety
- ☞ Provide proper levels of technical project and management leadership with frequent reviews to ensure project close-out to schedule and resolution of significant post TC issues



FAA and Applicant's Management
 Commitment to the Partnership for Safety Plan
 Provides Leadership and Resources



FAA and Applicant's Project Managers
 Jointly orchestrate the project and apply the
 Partnership for Safety Plan agreements



**FAA Standards Staff
 Project Officers**
 Provides timely standardized policy
 and guidance



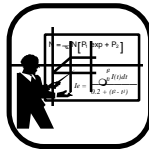
**FAA and Applicant's
 Engineers & Designees**
 Applies regulations and policy
 to find compliance to FAR



**FAA and Applicant's
 Inspectors & Designees**
 Determines conformity and
 airworthiness



**FAA and Applicant's
 Flight Test Pilots & Designees**
 Conducts FAA flight tests



FAA NRSs & Technical Specialists
 Provides expert advise and technical assistance



FAA Aircraft Evaluation Group
 Evaluates conformance to operations
 and maintenance requirements

KEY PLAYERS' ROLES

FAA and Applicant's Management

Provides leadership and resources

The Applicant and the FAA work to establish a PSP to reach a clear common understanding of their respective responsibilities for the design and production definition and the certification requirements. The respective managements provide leadership and resources to product certification teams through the Project Managers in order to accomplish the project and resolve issues. The management has ultimate responsibility through the product certification team for the quality of compliance finding work, standard application of regulatory compliance policy and procedures, and the timely, efficient completion of the product certification projects.

Teamwork

- Establishes PSP early for the involvement and commitment of both parties
- Ensures the Product Certification Team's full participation, application of the PSP, and adherence to the PSCP
- Ensures Product Certification Team engages all stakeholders including other FAA Engineers, Standards Staffs, Inspectors and Applicants to resolve integration issues, e.g. engine/propeller/APU to airframe compatibility
- Coaches and mentors Product Certification Team members
- Models behaviors that promote effective teamwork between the FAA and Applicant

Communication

- Communicates early and often about design, schedules, plans for demonstrating compliance and conformity and anticipated problems
- Facilitates access to best sources of information
- Ensures consistency and clarity of positions on issues is communicated to each other
- Promotes and ensures efficient resolution of issues at the operational level prior to elevating to the higher management levels

Accountability

- Participates in resolving critical issues identified in the PSCP
- Moderates appeal process through respective Project Managers
- Works in partnership to reach early agreement on certification basis
- Sets realistic schedules and monitors project status
- Provides leadership and management of resources to support the project
- Ensures the delivery of a quality product

Jointly the Managements Ensure

- ⇒ Resources are available to support project: team, travel funds, training, policy and administrative procedures
- ⇒ Integration of project requirements with total workload for the respective organizations including: resources, priorities, schedules, staff, and policy considerations

FAA and Applicant's Management, Cont'd.

- ⇒ Facilitation of issues resolution by providing management oversight and leadership
- ⇒ Identification of Project Manager focal points and lines of communication for certification project team
- ⇒ Participation in Familiarization Meeting to discuss certification aspects of proposed project concepts

FAA and Applicant's Project Managers

Orchestrates project and gets the job done

The FAA, Designees, and Applicant's Project Managers are the principal focal points for the project. They coordinate and direct the certification team's effort and ensure things are kept moving to achieve the Product Certification objectives.

Teamwork

- Ensure the right people from the FAA and Applicant are involved
- Develop and maintain the PSCP (See Appendix II)
- Ensure the Product Certification Project Team awareness of design features, proposed means of compliance, new materials, new production processes, co-production or foreign supplier issues, and other critical issues for timely resolution

Communication

- Ensure effective communication flow and quality documentation among specialists, FAA offices, and Applicant

Accountability

- Ensure commitments and PSCP schedules are met
- Develop proposed certification basis and certification PSCP
- Manage timely delivery completion of inspections, analysis, test data, exemptions, special conditions, equivalent safety findings, etc. for determining compliance and completing certification of the product
- Maintain effective oversight and control of the project

Jointly the PMs Ensure

- ⇒ Notification and involvement of FAA and Applicant in early project Phases
- ⇒ Preparation of all required documentation
- ⇒ Completion of accurate data submittals
- ⇒ Completion of planning and scheduling
- ⇒ Development of the compliance checklist
- ⇒ Adherence to agreed project sequence and schedule for test plans, completion of inspections and tests, and data and report submittals to show conformity and compliance
- ⇒ Planning for and coordination of all interactions, familiarization, and board meetings during all Phases
- ⇒ Determination of project resource requirements to meet FAA and Applicant commitments
- ⇒ Establishment of project team including necessary specialists
- ⇒ Preparation of the PSCP in coordination with all team members (Ref. Order 8100.5 and Appendix II)
- ⇒ Identification of new materials, new production processes, and co-production or foreign supplier arrangements requiring an undue burden assessment
- ⇒ Development of the product certification basis

FAA and Applicant's Project Managers, Cont'd.

- ⇒ Accountability as project focal points with their respective FAA, Designees, and Applicant team members to ensure team is always aware of project status
- ⇒ Participation in the development of new project-specific policy safety issues
- ⇒ Coordination of technical decisions and regulatory issues with their respective team members
- ⇒ Integration of work of project team to promote timely decisions (Ref. Order 8100.5)
- ⇒ Identification of unique/novel product features or applications, and potential need for coordination on issue papers, special conditions, exemptions, equivalent safety findings, (Ref. Order 8100.5)
- ⇒ Management of the issues resolution process, maintains an issues tracking system, and applies the issues resolution process, as needed
- ⇒ Participation in Pre-flight TC board and presents certification material on project
- ⇒ Participation in Final TC board and presents certification material on project, if applicable
- ⇒ Preparation of Type Certificate Data Sheet
- ⇒ Preparation of the Project Evaluation Form at the end of each Phase (Ref. Appendix III)
- ⇒ Preparation of Certification Compliance Summary Document (Ref. Order 8110.4 and Appendix II)

The FAA PM Ensures

- ⇒ Coordination with FAA Team members and Designees cooperatively keeping the project team aware of applicable policy and guidance material
- ⇒ Preparation of the Certification Project Notification and acknowledgment letter of Applicant's application (Ref. Orders 8100.5 and 8110.4)
- ⇒ Scheduling and chairing of preliminary, interim, flight test and final TC Board meetings as appropriate
- ⇒ Proper preparation, and Designee oversight, where appropriate, are provided for approval of Type Inspection Authorizations and/or FAA Form 8120-10 requests for conformity
- ⇒ Completion of project file compliance documentation including Applicant's, Designee's, and project team member's required input
- ⇒ Proposed certification basis for project and means of compliance are consistent with FAR and policy
- ⇒ Findings of compliance are made by appropriate accountable team members
- ⇒ Notification of Applicant early of schedule revisions and/or major issues after commencement of certification which would influence prior agreed objectives

The Applicant's PM Ensures

- ⇒ Demonstration of compliance to the FAR
- ⇒ Application for Type and Production Certification includes available relevant data/information
- ⇒ Development of proposed certification basis, means of compliance, and certification PSCP
- ⇒ Submittal of type design data, analyses, plans, and reports, and shows compliance per the agreed PSCP

FAA and Applicant's Project Managers, Cont'd.

- ⇒ Notification to FAA early of schedule revision and/or major design changes after commencement of certification which would influence prior agreed outcomes
- ⇒ Submittal of Statement of Conformity (FAA Form 8130-9) on product and components or parts
- ⇒ Notification to Inspector when ground test articles are ready for conformity inspection when required, and for pre-flight test conformity and airworthiness certification
- ⇒ Acceptance of Certificates and Approvals from FAA

FAA Standards Staff Project Officer

Coordinates Directorate Interaction

The Standards Staff Project Officer provides the certification team with clear and timely regulatory and policy guidance specific to the project. The Project Officer is the focal point within the accountable project Directorate for that policy and for engaging other appropriate Directorate Staffs on installation issues across FAR Parts e.g., engines, propellers, APUs.

Teamwork

- Works with Directorate policy staff and Product Certification team to provide coordinated policy to the team
- Assures that the certification basis, including means of compliance, is agreed upon early in project
- Assures timely support of the project regulatory and policy aspects

Communication

- Serves as advisor to the FAA and Applicant Project Managers and Designees on timely and responsive interpretation of policy and rules
- Raises critical policy issues early to the Project Managers, e.g., in meetings, telecons, issue papers; and documents agreements and actions to resolve them

Accountability

- Reviews and concurs with the certification basis early
- Provides guidance on standardized application of rules and policy
- Assures that last minute changes in policy are applied to Applicant's products only when critical new safety issues are identified, i.e., the potential for an accident or service difficulty sufficient to warrant Airworthiness Directive action if the product were in service

The FAA Standards Staff Project Officer

- ⇒ Serves as Directorate national focal point and provides Project Managers and Designees with early policy guidance consistent with national policy that is common to all Directorates, e.g., software, HIRF
- ⇒ Coordinates special conditions, exemptions, and equivalent safety findings within Directorate and with other Directorates, as appropriate
- ⇒ Provides pertinent FAR Part regulatory and policy guidance
- ⇒ Analyzes the PSCP to ensure the team has all necessary policies and to identify issues that require additional or future regulations or policies to be undertaken
- ⇒ Adheres to all applicable policy and guidance material
- ⇒ Attends all relevant meetings and discussions related to the establishing the certification basis and resolving non-standard means of compliance or other critical issues list items
- ⇒ Ensures timely processing of all Issue Papers, Special Conditions, Exemptions, etc. related to regulatory and policy issues
- ⇒ Ensures timely determination of the certification basis

FAA Engineers and/or Designees

Apply regulations and policy to find compliance

The Engineers, as assigned for appropriate disciplines, are the principal contacts for the Applicant. Their activity is always in coordination with the FAA Project Manager and follows the agreed PSCP for guiding the certification process, communication guidelines and how rules and policy will be applied. The Engineers and Designees understand the technical details of the project, application of applicable rules and policy, and are responsible for the majority of the compliance findings associated with the project.

Teamwork

- Works closely with team members to meet deadlines, e.g., coordinates early on with Aviation Safety Inspectors, Designees, and the Applicant to request conformity inspections, new material/process specification evaluations, and compliance findings, where needed
- Participates in all team meetings and discussions appropriate to their areas of responsibility and disciplines

Communication

- Uses timely and effective communication methods to identify and resolve problems early
- Communicates directly with Applicant and FAA counterparts on policy staff and other FAA Engineers and Inspectors to facilitate meeting project objectives
- Transmits policy and guidance material, with the Standards Staff Project Officer, to Applicant for timely resolution of critical issues
- Raises critical engineering issues early to the Project Manager, e.g., in meetings, telecons, issue papers; and documents agreements and actions to resolve them
- Communicates the need for specialized expertise and resources to the team and management

Accountability

- Assures compliance with regulations and policy
- Responsible for technical details and documentation of findings and issues resolution
- Maintains appropriate oversight of the Designees
- Uses all available resources, e.g., peers, Designees, Technical Specialists, NRSs, policy staff, management, to make quality technical decisions and accomplish project deadlines

The FAA Engineers and/or Designees, as Appropriate

- ⇒ Attends all appropriate familiarization, technical, and board meetings
- ⇒ Notifies the FAA Project Manager early of the need for NRS or technical specialist assistance
- ⇒ Assists in developing certification basis
- ⇒ Reviews and approves certification means of compliance consistent with the agreed certification PSCP, certification basis and related policy (FAA only)
- ⇒ Oversees the use of engineering delegations and Designees in accordance with the Delegation section of the PSCP (FAA only)

FAA Engineers and/or Designees, Cont'd.

- ⇒ Communicates with Applicant and project team on day-to-day technical issues; keeps Project Manager informed
- ⇒ Makes compliance findings for design approval
- ⇒ Drafts issue papers
- ⇒ Ensures the quality and timeliness of approvals and documentation
- ⇒ Prepares Type Inspection Authorizations in discipline, requests conformity inspection, when needed, of appropriate test articles, and coordinates with FAA Inspectors and their Designees
- ⇒ Coordinates with FAA Inspectors and their Designees on the approval of critical parts and new materials or new process specifications
- ⇒ Adheres to all applicable policy and guidance material
- ⇒ Assures that all data submitted for design and production is complete and accurate to serve as the foundation for issuance of the certificate and subsequent continued airworthiness management activities throughout the life cycle of the aircraft

FAA Inspectors and/or Designees

Determines conformance and airworthiness

The FAA Aviation Safety Inspectors provide consultation and advice on production processes proposed in the design. They conduct and oversee, through Designees, a variety of conformity inspections, evaluations of aircraft airworthiness, and issues airworthiness certificates or other approvals. They conduct progressive evaluation of the manufacturer's quality and production systems for eventual production approval. The Inspector is alert to conformance issues on critical parts that cannot be determined solely from type design data. This would then require focused process control, inspection, or evaluation within the production quality system.

Teamwork

- Works closely with team members to meet deadlines, e.g., coordinates early on with FAA Engineers, other Aviation Safety Inspectors, Designees, and the Applicant to conduct conformity inspections, new material/process specification evaluations, and compliance findings, where needed
- Participates in all team meetings and discussions appropriate to their areas of responsibility and disciplines

Communication

- Uses timely and effective communication methods to identify and resolve problems early
- Communicates directly with the Applicant and FAA project team members, and other Aviation Safety Inspectors to facilitate meeting project objectives
- Raises critical production issues early to the Project Manager, e.g., in meetings, telecons, issue papers, and documents agreements and actions to resolve them
- Communicates the need for specialized expertise and resources to the team and management

Accountability

- Briefs Applicant on conformity inspection, airworthiness approval, and production approval requirements
- Evaluates conformity, when requested, prior to official FAA tests
- Determines airworthiness of aircraft prior to flight test
- Maintains appropriate oversight of their Designees
- Assures compliance with regulations and policy governing production approvals
- Assumes responsibility for production related technical issues resolution and documentation of findings
- Uses all available resources, e.g., peers, Designees, NRSs, policy staff, management, to make quality technical decisions and accomplish project deadlines

The FAA Inspectors and/or Designees as Appropriate

- ⇒ Attends all appropriate familiarization, technical, and board Meetings
- ⇒ Notifies the FAA Project Manager early of the need for NRS or technical specialist assistance

FAA Inspectors and/or Designees, Cont'd.

- ⇒ Assists in developing certification basis
- ⇒ Reviews and approves production means of compliance consistent with the agreed certification PSCP, certification basis and related policy (FAA only)
- ⇒ Oversees the use of production delegations and Designees and Applicant in accordance with the Delegation section of the PSCP (FAA only)
- ⇒ Coordinates with Applicant and project team on day-to-day issues related to production and conformity aspects; keeps Project Manager informed.”
- ⇒ Makes compliance findings for production approval
- ⇒ Coordinates with FAA Engineering or their Designees, as assigned, on requests for conformity inspection and ensures conformity of test articles
- ⇒ Coordinates with FAA Engineering or their Designees, as assigned, on approval of design data affecting critical parts, new material, new process specifications, new technology, and co-production or foreign supplier arrangements that require an undue burden assessment.
- ⇒ Adheres to all applicable policy and guidance material
- ⇒ Coordinates and prepares appropriate items for Type Inspection Authorization in discipline
- ⇒ Assures that all production and inspection data submitted for design and production approval are complete and accurate to serve as the foundation for issuance of the certificate and subsequent continued airworthiness management activities throughout the life cycle of the aircraft
- ⇒ Ensures conformity and Airworthiness Certification for release of aircraft for FAA flight testing in coordination with FAA flight test pilots and Engineers

FAA Flight Test Pilots and/or Designees

Conducts Product Certification flight tests

The Flight Test Pilots provide technical advice to the team on aircraft configuration, operation, flight testing and instrumentation needed for compliance. They conduct FAA flight tests and other appropriate evaluations, find compliance to flight test requirements, and provide guidance to the Applicant on preparing the flight manual and related operational procedures.

Teamwork

- Works closely with team members to meet deadlines, e.g., coordinates early with Engineers, Aviation Safety Inspectors, and Applicant for flight test requirements
- Participates in all team meetings and discussions appropriate to their areas of responsibility and disciplines

Communication

- Uses informal and formal communication channels to identify and resolve problems early
- Communicates directly with Applicant and FAA counterparts on the policy staff and with other FAA Engineers
- Raises critical flight test issues early to the Project Manager, e.g. in meetings, telecons, issue papers, and documents agreements and actions to resolve them
- Communicates the need for specialized expertise

Accountability

- Assures compliance with regulations and policy
- Assumes responsibility for technical details in their discipline
- Uses all available resources, e.g. peers, NRSs, policy staff, management, to make quality technical decisions and accomplish project deadlines

The FAA Pilots and/or Designees as Appropriate

- ⇒ Attends all Familiarization and board appropriate Meetings
- ⇒ Notifies the Project Manager early on of the need for NRS or technical specialist involvement
- ⇒ Assists in developing certification basis
- ⇒ Reviews and approves certification means of compliance consistent with the agreed certification PSCP, certification basis and related policy (FAA only)
- ⇒ Oversees the use of delegations and Designees in accordance with the Delegation section of the PSCP (FAA only)
- ⇒ Communicates with Applicant and project team on day-to-day technical issues; keeps Project Manager informed
- ⇒ Makes compliance findings
- ⇒ Drafts issue papers
- ⇒ Prepares relevant items for Type Inspection Authorization in discipline and requests conformity of flight test articles in coordination with Inspector

FAA Flight Test Pilots and/or Designees, Cont'd.

- ⇒ Conducts FAA Product Certification flight tests
- ⇒ Reviews aircraft flight manual and related procedures for approval
- ⇒ Adheres to all applicable policy and guidance material
- ⇒ Assures that all appropriate flight test data submitted for TC is complete and accurate to serve as the foundation for issuance of the certificate and subsequent continued airworthiness management activities throughout the life cycle of the aircraft
- ⇒ Considers flight test risk management in conjunction with entire team

FAA National Resource Specialists and Technical Specialists

Provides expert advice and technical assistance

The NRSs and/or Technical Specialists provides professional technical guidance, advice and assistance in their discipline. They are our direct link to an extensive professional network in the R&D community, professional and academic organizations, industry, other government, and national and international experts in their discipline.

Teamwork

- Works as advisors to certification project teams on issues that require precedent setting means of compliance relating to new or complex technology and technical specialties
- Participates in Special Certification Reviews, Critical Design Reviews, and Multiple Expert Opinion Teams
- Assists FAA team members in identifying areas where their expertise can add value to the quality and timeliness of compliance findings or resolution of complex technical issues

Communication

- Uses informal and formal communication channels to resolve problems identified by the project team early
- Communicates the need for their specialized expertise
- Raises issues early, e.g. in meetings, telecons, issue papers, etc.

Accountability

- Provides timely response to project team needs for means of compliance or precedent setting design or production aspects

The FAA NRSs and/or Technical Specialists

- ⇒ Attends appropriate familiarization and board meetings as they and the certification team deem necessary
- ⇒ Assists certification team in understanding special technical disciplines and new or complex technology related issues to facilitate timely and adequate compliance findings

FAA Aircraft Evaluation Group

Evaluates conformance to operations & maintenance requirements

The FAA Aircraft Evaluation Group (AEG) provides a link to applicable Flight Standards technical services. This lends an aircraft operational and maintenance perspective to the type design assessment thereby allowing FAA Engineering and their Designees to determine appropriate compliance requirements in those areas. The AEG carries knowledge of the product and how it was type certificated to the aircraft Maintenance Review Board, Flight Operations Evaluation Board, and Flight Standardization Board activities.

Teamwork

- Works closely with team members to meet deadlines, e.g. coordinates early with Engineers, Aviation Safety Inspectors, and the Applicant on maintenance and operational issues
- Participates in all team meetings and discussions appropriate to maintenance and operational disciplines

Communication

- Uses informal and formal communication channels to identify and resolve problems early
- Communicates directly with the Applicant and FAA counterparts in the Directorate Standards Staff, Flight Standards policy staff, and FAA Engineers
- Provides AFS policy and guidance material to the team
- Raises critical maintenance or operational issues early to the Project Manager, e.g., in meetings, telecons, issue papers; and documents agreements and actions to resolve them
- Communicates the need for specialized expertise e.g., AFS, NRSs

Accountability

- Serves as the focal point for all Flight Standards interests in the certification process
- Evaluates the product and its systems for operational suitability and maintainability
- Uses all available resources (e.g., other AFS organizations, FAA Engineers, Aviation Safety Inspectors) to make quality, technical decisions and accomplish project deadlines

The FAA Aircraft Evaluation Group (AEG)

- ⇒ Attends all appropriate familiarization, technical, and board Meetings
- ⇒ Communicates with Applicant and project team on day-to-day technical issues related to operations and maintenance, and keeps the Project Manager informed
- ⇒ Coordinates on Type Inspection Authorizations regarding AEG issues and coordinates with FAA Engineers and Aviation Safety Inspectors or their Designees
- ⇒ Participates in appropriate flight testing related to Flight Standards operational issues
- ⇒ Adheres to all applicable policy and guidance material
- ⇒ Assists the certification team in understanding operations and maintenance issues for timely transition into service, and coordinates appropriate issues with key AFS policy divisions
- ⇒ Transmits pertinent AFS policy and guidance to project team

FAA Aircraft Evaluation Group, Cont'd.

- ⇒ Assists Engineers in determining that means of compliance meet operations and maintenance requirements
- ⇒ Provides maintenance and operational insight of the type design into Flight Standardization Board, Flight Operations Evaluation Board, Maintenance Review Board processes
- ⇒ Reviews and coordinates maintenance and operational aspects of proposed documents for acceptance, i.e., AFM, Instructions for Continued Airworthiness, Operating Instructions

IN CLOSING . . .

The FAA and Applicants, in a Partnership for Safety, are dedicated to providing a highly effective and efficient Product Certification Process. Our mutual expectations for the FAA and Applicants' Partnership for Safety are to plan early, communicate often, and cooperate on initiatives that make aircraft increasingly safer. All Key Players on Product Certification Teams make our commitments happen.

Our commitment to Public Safety -

☞ Communicate often to:

Explain our expectations and listen to concerns

Strive for safe solutions to key safety decisions

Work as “One Safety Team”

☞ Be accountable to:

Identify best practices and provide quality service

Allocate resources appropriately, including delegations

Apply rules and policy properly in a standardized way

Keep commitments

☞ Come to closure to:

Complete projects to the PSCP and on schedule

Work cooperatively and constructively

Follow the agreed issues resolution processes

APPENDIX I

PARTNERSHIP FOR SAFETY PLAN

between the

FEDERAL AVIATION ADMINISTRATION

and

APPLICANT

The material contained herein is an aid for constructing a Partnership for Safety Plan (PSP). This aid is intentionally not a “boiler plate”, but allows the freedom to innovate and meet the needs of the Applicant and the FAA. However, it is essential that the PSP addresses the same key content areas of this aid ensuring that as written it captures the meaning and intent of this Guide.

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SIGNATORIES

PURPOSE

The purpose of this Partnership for Safety Plan (PSP) is to define a working relationship between the Aircraft Certification Service of the Federal Aviation Administration (FAA) and Applicant. It provides the foundation from which to build mutual trust, leadership, team work, and efficient business practices. This Plan enables the FAA, Applicant, and their staffs to expedite certification projects by focusing on safety significant issues. It is the mutual goal of the FAA and Applicant to meet or exceed the expectations of this agreement to achieve the following vision:

Vision of the Product Certification Process

A credible and concise product certification process that results in:

- Timely and efficient product type design and production approvals
- Clearly defined and understood roles, responsibilities, and accountability of all stakeholders
- Timely identification and resolution of the certification basis, potential safety issues, and business practice requirements
- Optimal delegation using safety management concepts with appropriate controls and oversight

In the establishment of this PSP, it is understood that a cooperative working relationship is required for this process to be effective. To achieve successfully this Vision, it is understood that the Applicant and FAA team members will work in accordance with the guidelines contained in this PSP.

EFFECTIVITY

This PSP becomes effective upon approval by the FAA Directorate Manager and the Applicant's President, CEO, or Senior VP officer empowered to commit for the Applicant. It continues in effect until it is superseded, revised or terminated and may be amended by mutual consent of the parties. Any change in the services furnished or other provisions of this PSP is formalized by an appropriate written amendment signed by both parties, which outlines the nature of the change.

PARTNERSHIP FOR SAFETY

1. GENERAL

This PSP is a living document that will be developed by the FAA and the Applicant to the greatest extent possible in advance of any specific certification project. The PSP is an important prerequisite to a specific product certification project. It establishes the principles and procedures for early identification of critical issues and early planning so that subsequent to this PSP, future projects can be completed in a timely and efficient fashion. The PSP will be managed and maintained by the FAA's and Applicant's management focal points in accordance with the "Communications" section . below. The PSP will include, but not be limited to, consideration of the elements outlined below. The Applicant and the FAA agree to work to the principles and operational norms outlined in this PSP and to future Project Specific Certification Plans (PSCP)

that may be developed in conjunction with this agreement. The PSCP is discussed in Appendix II of *the FAA and Industry Guide to Product Certification*.

2. CORPORATE PLANNING

The Applicant and the FAA jointly conduct periodic management program reviews using an agreed process to provide early insight into future potential projects. These reviews also provide a forum to begin early planning for those potential projects as outlined in the early involvement Phases of *the FAA and Industry Guide to Product Certification*. The reviews would, to the extent possible, touch broadly on areas that should require special attention, e.g., special conditions, exemptions, equivalent safety findings, unique designs, new materials or processes, production or operational aspects, foreign validation, co-production or use of foreign suppliers, continued airworthiness

The FAA and Applicant will participate in early identification of product concepts, applicable standards, and in the product definition and risk management Phases. This will be done as potential certification projects arise to assure agreement and commitment on dealing with critical issues in a value added way. This is an iterative process requiring ongoing mutual evaluation and continuous improvement of the PSP and related processes. The PSP gives the FAA a means to keep the Applicant informed of new proposed regulations or policy that could affect future product certification projects.

3. COMMUNICATION AND COORDINATION

In the PSP, communication and coordination paths should be clearly defined between the FAA and Applicant. Focal points will be identified to avoid conflict and keep both parties informed of all critical communications that affect the needs and responsibilities of their respective roles. This does not preclude any team members from communicating with any other members, but they need to assure the focal points are informed. Thus, critical links should be defined to ensure roles and responsibilities are clear and to facilitate conflict resolution. The focal points will be responsible for the maintenance of the PSP.

4. DELEGATION

The FAA depends on using both individual and organizational delegations in the certification process. Delegation will be used to the maximum extent practicable with appropriate oversight safeguards as defined in the FAA's delegation management process policies.

The FAA Engineering and Aviation Safety Inspectors' Designees, Designee oversight controls, related documentation, etc. should be identified and agreed early, preferably prior to a specific project. This should also include by reference, reliance on existing agreements or working procedures generated between the FAA and Applicant, where appropriate. The PSP should be specific as to what aspects of the FAA project responsibilities are delegated, and should address the delegation and oversight process as well as Designees disciplines and limitations. The FAA and Applicant agree to manage all Designee activity within the regulations and policy regarding Designee appointment, procedures, and oversight. It is essential that the FAA and the public have confidence in the integrity of the Designee system and that it functions properly. Both the FAA and Applicant agree to foster an environment where open communication between the Designees and Applicant's management, and between the Designees and their FAA counterparts is standard practice. That environment should encourage the Designees, within the scope of their delegation,

to openly communicate certification items with FAA which is necessary to maintain confidence in the Designee system. The Applicant agrees to create a working environment where Designees can make compliance and conformity findings free from undue pressure and with the support and knowledge of the FAA. It should be clearly understood by FAA personnel and Designees that their objective is to find compliance with the regulations and not to dictate design.

Because of the close integration of the design, production, and continued airworthiness processes, it is necessary to have all stakeholders in the delegation process agree on the extent of delegation, the procedures, and the degree of delegation oversight to be used in each project. The Applicant and FAA Engineers, Aviation Safety Inspectors, Flight Test Pilots, and FAA Designees will agree upon and document a plan by which the Designees in different disciplines can work together directly to the greatest extent possible to ensure compliance to the FAR while providing more timely project management.

The PSP should also describe the respective FAA and Applicant roles in the conformity inspection process. As noted in applicable FAA Orders and policy, the goal of the FAA and Applicant is to develop a system that ensures conforming products and that the FAA can rely upon to the greatest extent possible using the Designees with appropriate oversight to expedite the work. This should include in coordination with the Delegation section of the PSP, criteria for determining which conformities will be conducted, which are delegated to both Engineering and Aviation Safety Inspectors' Designees, and how deviations will be dispositioned.

The system should include, but is not limited to:

- Maintaining the custody chain of conformed articles destined for an official FAA test.
- Notifying FAA Aviation Safety Inspector of any changes to ground/flight test articles after conformity inspection has been completed.
- Ensuring requests are not duplicated and the timely and efficient conduct of conformities and dispositioning of deviations occurs.
- Identifying who issues the requests, conducts the inspections, and dispositiones the deviations.
- Providing for the completion of inspection, documentation, and dispositioning of deviations or changes before tests are conducted.

5. PRODUCTION QUALITY SYSTEM EVALUATION

In addition, the PSP should describe the FAA and Applicant's roles in the production approval process. The goal of FAA production approval is to verify that the Applicant has established a system which ensures that only products and parts conforming to the FAA approved design are released to service. Evaluations to determine adequacy of this system should be conducted by the FAA during the type certification Phase of the project, where practicable. The FAA Aviation Safety Inspectors' Designees, with appropriate oversight, could be used to facilitate the work

CONTINUOUS IMPROVEMENT

1. ISSUES RESOLUTION PROCESS

The objective of this process is to identify and resolve issues and disagreements as early as possible at the team working level facilitated by the Applicant's and the FAA's Project Managers (PMs). The Applicant and FAA PMs will jointly maintain a project issues tracking list. They will continually manage those issues to assure adequate progress is being made on the resolution of issues so as to ensure compliance with the FAR while not adversely affecting project schedules. The PMs will periodically keep their managements and other certification team members apprised of the progress on resolving issues. If there is agreement on the progress of issues resolution, the Applicant and FAA PMs will document the actions, decisions, and outcomes in the project records. Any necessary changes to the project schedule or the issues will be coordinated and agreed upon by all affected team members. Should any problems arise with open issues where their resolution is not proceeding according to the agreed PSCP, the PMs will utilize the following issues resolution process:

- (a.) If there is disagreement, the Applicant and FAA PMs, their respective managers, and other appropriate team members in the affected disciplines will review the issue and recommend a solution. If they agree, the resolution will be documented and all team members will be informed.
- (b.) If the managers and appropriate team members are unable to agree, the office raising the concerns will prepare a white paper detailing the issue, respective parties' positions, and options for resolution. Timelines will be established for resolution of each issue to permit tracking via the project issues list and ensure timely resolution. Where appropriate, the FAA Issue Paper process should be used, but should not be applied just for the sake of tracking which can be done through the project issues tracking list maintained by the FAA and Applicant PMs.
- (c.) The issue will then be submitted to the applicable Directorate Manager(s), the FAA and Applicant PM's management, and, where appropriate, FAA regional counsel and other appropriate FAA Division(s) for review and disposition.
- (d.) The conclusions, recommendations, and outcome of the issue resolution will be documented by the Applicant and FAA PMs in the project records.

2. PERFORMANCE MEASURES

(a.) GENERAL

Project tracking and documentation provide for early identification and resolution of potential conflicts. Early communication between the Applicant and FAA in the conceptual/prototype stages of product development is critical to assure availability of resources, adequate planning, and flexibility for both the FAA and the Applicant. Effective project management oversight, planning, communication, and documentation is needed. This process is very management and discipline dependent. Priority must be placed on early identification and resolution of the following::

- Establishment of certification basis and means of compliance
- Project planning and management including, for type design and production issues.
- Identification and tracking of significant issues, issues papers, exemptions, special conditions, equivalent safety finding proposals, Airworthiness Limitations, and applicable in-service maintenance/operational history
- Definition of clear, up-front, pass/fail criteria, wherever possible
- Validation and documentation of critical assumptions, installation interface issues, and data for Airworthiness Limitations
- Conformity requirements involving e.g., major critical production processes, new materials, new technologies, Delegation (what, why, oversight criteria)
- Co-production issues, foreign supplier arrangements requiring undue burden assessment, other authorities' involvement, validation needs, etc.
- Resource needs/constraints of all stakeholders accommodated to the greatest extent possible

The above guidelines should focus on producing quality deliverables that show an efficient and credible certification process. These and other project deliverables can be associated with the Phases in the certification process as delineated in *the FAA and Industry Guide to Product Certification*. The operating norms agreed upon between the FAA and the Applicant will establish the basis for operating under this PSP and subsequent PSCPs..

(b.) OPERATING NORMS

Each FAA Directorate will establish with the Applicant, agreed, documented, operating norms. These norms will guide the timeliness and quality of deliverables and services provided by both the FAA and Applicant during the project. Operating norms should be defined to meet the needs of the Applicant and FAA consistent with agreed PSCPs.

Many factors affect the planning and management of certification projects, such as, project size and complexity, degree of delegation. The FAA and Applicants recognize, for example, that an STC or engine project may have significantly different resource needs and timing than a rotorcraft or large transport airplane project. The PSP and each PSCP should identify appropriate agreed operating norms since there could be different team members on different PSCPs. An agreed PSP and early pre-project communication and planning in accordance with that PSP are essential prerequisites to preparing for successful certification projects. The objective of any successful project is to meet or beat the plan. Unless compelling reasons are presented to deviate from this

Guide, the operating norms for certain key deliverables should be set as low as possible within the following typical ranges:

Product Certification Process Norms

- **Within 2 weeks after application:**
 - Acknowledgment of application issued
 - FAA Certification Project Notification (CPN) issued

- **Within 1 month after application:**
 - Project team identified (FAA and Applicant)
 - Preliminary Type Certification Board Meeting (PTCBM) scheduled

- **Within 1 to 3 months after PTCBM:**
 - Proposed Certification Basis G-1 issue paper prepared and processing begins (stage 1)
 - PSCP drafted

- **Within 4 to 6 months after PTCBM:**
 - Final Certification Basis G-1 issue paper closed.
 - PSCP agreed and signed, including the mutually agreed project schedule.

- **Within 6 to 9 months after PTCBM:**
 - All issue papers closed

- **One month prior to scheduled TC/STC/Production Approval issuance:**
 - Compliance documentation submittals should be scheduled over the course of a project to be completed by this point in time. More than one month may be needed in some cases, especially when submittals are not FAA Designee approved or recommended for approval.

Additional norms may be necessary or appropriate depending upon the specific project needs. When developing a PSCP, the need to define norms should be assessed for all issues identified such as those considerations in Paragraph 2.(a.) above or other deliverables. Any major issues, design changes, or compliance requirements should result in agreed revisions to the PSCP with appropriate milestones for closure. As the project progresses other major issues may be identified. Where appropriate, issue papers and a revised PSCP will be prepared within 1 month after identification of the issue along with a plan to achieve its resolution. In such cases, the FAA will work within boundaries of their policies and public rulemaking procedures. The PSP compels the partners to work together to understand the product architecture early enough to preclude last-minute guidance (verbal or written) new interpretations or rule escalation that would adversely affect the mutually agreed upon program goals.

(c.) PROJECT EVALUATION FORMS

The Project Evaluation Forms (Appendix III of the *FAA and Industry Guide to Product Certification*) are tools that can be used for project management during the appropriate Phases. The FAA and Applicant Project Managers (PMs) should jointly prepare a Project Evaluation Form at the close of appropriate Phases of a project. The PMs are encouraged to include the completion of the Project Evaluation Forms as milestones when preparing their PSCP schedule. To facilitate continuous improvement any necessary corrective actions should be implemented by the Team and the Project Evaluation Forms should be maintained in the official project file for future national or local program evaluation. When the evaluation identifies the need for corrective actions or improvements it should be included as a part of the Compliance Summary Document for future reference.

SIGNATORIES

The FAA and Applicant agree to the provisions of this PSP as indicated by the signature of their duly authorized representatives.

Agreed by: *(This is a representative sample of possible signatories and could include others deemed appropriate to provide necessary commitments and accountability. Include Names and date)*

Applicant President, CEO, or Senior VP

FAA Directorate Manager(s)

Applicant Certification Manager

FAA ACO Manager(s)

Applicant VP Quality Assurance

FAA MIO/MIDO Manager(s)

FAA AEG Manager(s)

FAA Standards Staff Manager(s)

APPENDIX II

PROJECT SPECIFIC CERTIFICATION PLAN

between the

FEDERAL AVIATION ADMINISTRATION

and

APPLICANT

for Product Certification

The material contained herein is an aid for preparing the Project Specific Certification Plan (PSCP). This aid is intentionally not a “boiler plate”, but allows the freedom to innovate and meet the special project needs of the Applicant and FAA. However, it is essential that the PSCP addresses the same key content areas of this aid ensuring that as written it captures the meaning and intent of this Guide. The PSCP should include elements that were not addressed in detail in the PSP and it should incorporate by reference appropriate procedures, agreements, or other elements pertinent to the project.

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SIGNATORIES

PURPOSE

The purpose of this PSCP is to define and document a product certification plan between the Aircraft Certification Service of the Federal Aviation Administration (FAA) and Applicant to expedite certification of the product under standardized procedures. The PSCP will provide the foundation from which to build mutual trust, team work, and efficient business practices between the FAA and Applicant during certification of the product. It is the mutual goal of all team members to meet or exceed the expectations of this agreement. It is understood that this PSCP will be executed in accordance with the PSP.

In the establishment of this PSCP, it is understood that a cooperative working relationship is required for these procedures to be effective. To implement successfully the PSCP procedures, it is understood that both the Applicant and FAA team members work in accordance with the established guidelines. The FAA team members will recognize and utilize the knowledge of the FAA Designees to the greatest extent possible and keep the Applicant's team members abreast of certification issues that may arise. The PSCP schedule will be within specified ranges agreed to in the norms of the PSP and additional milestones will be considered by the FAA and Applicant as firm commitments unless a change is agreed to. It is intended that all team members facilitate review and approval of the necessary design and production data and related compliance documents in a timely manner with the objective of bettering the PSCP wherever possible.

The PSCP is a living document. This means that if both the FAA and Applicant agree that modification to the Plan is needed, an amended Plan is drafted. The Plan will be developed to the greatest extent possible as soon as the FAA and the Applicant agree that the certification project is a viable one for which resources can be planned and committed for its completion. As the project progresses, the PSCP will be managed and maintained jointly by the FAA and Applicant's Project Managers.

EFFECTIVITY

This PSCP shall become effective upon approval by the FAA Aircraft Certification Office Manager and the Applicant's Certification or Airworthiness Manager. It will continue in effect throughout all Phases of the product certification unless it is superseded, revised, or terminated. This PSCP may be amended by mutual agreement or terminated by either party. Any change in the services furnished or other provisions of this PSCP will be formalized by an appropriate written amendment signed by both parties, which will outline the nature of the change.

PRODUCT CERTIFICATION

1. PROJECT DESCRIPTION

This section should contain a brief description of the project.

2. PROJECT SCHEDULE

Provide a detailed project schedule to identify all major milestones, including appropriate project management reviews and any required scheduled deliverables such as those listed below. These milestones need to be established in accordance with the operating norms identified in the PSP. Every effort must be made to establish realistic schedules considering both the FAA and Applicant's total workloads and other resource commitments. Design, production, operational, and maintenance aspects as well as foreign authority validation requirements should be planned for and considered.. All issue papers should also be included with a resolution plan and prioritization of the issues to be resolved. The schedule should also adhere to the Phases and process flow identified in *The FAA and Industry Guide to Product Certification*. This would include identifying in the schedule all appropriate deliverables for the project such as, but not limited to, those shown below:

Deliverables:

- Familiarization and board meeting(s) minutes
- Draft and final PSCP
- Product Certification team and management status reviews
- Application for Type/Production Certification
- Letter of application acknowledgment
- Certification Project Notification
- Type Certification basis (documented in G-1 issue paper)
- Issue papers, special conditions, exemptions, equivalent safety findings, undue burden assessments, etc. (including resolution plan and schedule)
- Issues tracking list
- Compliance check list
- Conformity procedures
- Type Inspection Authorizations and Conformity requests
- Delegation plan
- Compliance data submittals (e.g., test plans/reports, analyses.)
- Type Inspection Report (TIR)
- Installation and Operating instructions
- Flight Manual
- Structural Repair Manual
- Instructions for Continued Airworthiness
- Continued Airworthiness management plan
- Type Design approvals (TC/STC and amendments)
- Type Certificate Data Sheet (TCDS)
- Production approvals/certification
- Production Limitation Record (PLR)

- Airworthiness Certifications
- Compliance Summary Document
- Project Evaluation Forms

3. CERTIFICATION BASIS

The Certification Basis identifies the applicable standards to which the Applicant must show compliance. It also includes the need for special conditions, exemptions, and equivalent safety findings, if any. An issues list should be included to highlight for resolution those special requirements and other areas which may be significant, even though they may not warrant a special condition, exemption, or equivalent safety finding.

4. MEANS OF COMPLIANCE

This section of the PSCP will summarize the applicable FAR paragraph by paragraph with the agreed means of compliance that will be met for type certification. The PSCP will be comprehensive and identify all compliance requirements including the Type Certificate Data Sheet, Instructions for Continued Airworthiness, operational requirements such as. flight manuals, time-limited-dispatch to ensure their timely completion. The PSCP will identify which compliance items are delegated or not and why, when test plans, conformity inspections, test or analytic reports are to be submitted and approved,; and who has primary responsibility for the deliverables to both the FAA and the Applicant.

6. COMMUNICATION AND COORDINATION

This section describes the communication and coordination paths between the FAA, the Applicant, and ,where appropriate, co-producers, suppliers, other Civil Aviation Authorities, etc. Focal points and their roles should be clearly identified and kept to a minimum to avoid conflict. The Applicant and the FAA PMs must be kept informed of all critical communications. This does not preclude any team member from communicating with any other member, but they need to assure the PMs are informed. Thus, critical links should be defined to ensure roles and responsibilities are clear to define accountable team members responsible for deliverables and to facilitate conflict resolution. Team members should include, but are not limited to the following:

- Applicant’s Project Manager
- FAA Project Manager
- Applicant’s Project Quality Manager
- FAA Engineers and Designees
- FAA Aviation Safety Inspectors and Designees
- FAA Flight Test Pilots and Designees
- FAA Standards Staff Project Officer
- FAA Flight Standards AEG
- FAA National Resource Specialists and Technical Specialists (as required)
- Other authorities (for overseas assistance on witnessing or conformities or when type certificate validation is anticipated)
- FAA and Applicant’s Legal (consultation as required)

6. DELEGATION

The oversight and documentation requirements of Engineers, Aviation Safety Inspectors, and Flight Test Pilot Designees requirements should be identified and agreed to in this section. This

should also include reliance on existing delegation authorization agreements or working procedures generated between the FAA, Applicant, and other Authorities, as appropriate, that should already be specified in the PSP.

The PSCP should be specific as to what aspects of the project are delegated and what if any stipulations, coordination, or limitations are placed upon that delegation. Delegation should be applied to the maximum extent practicable with appropriate safeguards and oversight as defined in the FAA's delegation management process policy and this PSCP. Because of the close integration of the design, production, and continued airworthiness processes, it is necessary to have all stakeholders agree on the procedures and degree of delegation and oversight to be used in the project.

To facilitate certification, the FAA Designee system will be utilized to the greatest extent possible. Both the FAA and Applicant agree to foster an environment where open communication between the Designees and company management, and between the Designees and their FAA counterparts is standard practice. The Applicant agrees to create a working environment where Designees can make compliance and conformity findings free from undue pressure and with the support and knowledge of the FAA. It is understood by FAA personnel and Designees that their objective is to find compliance and conformity with the regulations and not to dictate design. The FAA and Applicant agree to manage all Designee activity within the regulations and policy regarding Designee appointment, procedures, and oversight.

7. TESTING PLAN

(a.) GENERAL

This section should contain the requirements for the planning, preparation, and conduct of FAA required testing. The Applicant's product development tests do not require FAA involvement. However, FAA certification credit will not be granted for development tests unless arrangements are made and agreed upon prior to testing. These pretest arrangements must be coordinated with appropriate FAA Engineering, Flight Test Pilots, and Aviation Safety Inspectors with sufficient lead time to ensure all aspects necessary for the desired FAA credit toward certification are achieved. This is particularly important for critical parts and components or when new technology, new materials or new processes are involved which should necessitate a greater depth of review and conformity inspection. FAA personnel will witness all ground and flight tests intended for certification credit that are not specifically delegated to Designees prior to testing. Delegation should be used wherever possible. Who will witness which tests should be planned for and documented in advance in the Delegation section of the PSCP and the compliance checklist. When the FAA will witness, they will meet the project schedule as agreed to the greatest extent possible. The Applicant should keep the FAA informed of test schedules and changes should be negotiated with affected team members.

The following items are required prior to testing:

- Drawings and specifications sufficiently describing the design and production of the test article;
- FAA approved test plan, including a description and/or drawing of the test set-up, instrumentation, calibration requirements, etc.;
- The Applicant's completed inspections and Statement of Conformity, FAA Form 8130-9;

- FAA Form 8120-10, Conformity Request;
- FAA Form 8100-1, Conformity Report; indicating the results of the Conformity Inspection including disposition of deviations by FAA Engineering or their Designee if so delegated. (a copy must be available for the official test witnessing).

When specifically delegated as identified in the Delegation section of the PSCP, Designees can submit fully approved test plans with FAA Form 8110-3 and FAA Form 8120-10 requests for conformity inspection, where needed, and disposition conformity deviations. All instrumentation that is required for an FAA certification test will required calibration criteria to be agreed with the accountable FAA Engineering team members or their Designee if so delegated and to be documented in each test plan or in generic calibration procedures document as appropriate.

(b.) FLIGHT TEST

This section should contain any unique requirements for the planning, preparation, and conduct of FAA required flight testing. Flight tests are conducted in accordance with the requirements of the TIA. The TIA also authorizes conformity and airworthiness inspections and flight tests to determine compliance to the certification requirements. It is important to ensure close pre-flight test coordination with the FAA, including FAA discipline managers, Aviation Safety Inspectors, and the flight test pilots in accordance with FAA policy. The PSCP will provide the clarity to ensure:

- Conducting of conformity inspections early in the project.
- Timely, high-quality documentation.
- Pertinent Applicant flight tests are completed and results reported prior to FAA flight test.
- Coordination within FAA for concurrent Product Certification and AEG flight testing.
- Aircraft conformity, airworthiness certification, and identification of operating limitations.
- Detailed scheduling and the use of delegation will be specified.
- Consideration of flight test risk management in conjunction with entire team

(c.) CONFORMITY

Federal Aviation Regulation FAR 21.33 and 21.53 requires the Applicant to make all inspections necessary to establish the conformity of the product being presented to the Administrator for certification and to submit a Statement of Conformity to the FAA on FAA Form 8130-9. The FAA will then determine as far in advance as possible, which Statements of Conformity it will accept without verification and which will require FAA conformity inspections. Some factors affecting this would be the criticality of the part/component, whether there is new material, new process, or technology involved, and/or whether there is an existing quality control or inspection system that has demonstrated its ability to adequately assure conformity. This section of the PSCP should describe what conformities will be needed, and the FAA's and Applicant's roles in the conformity inspection process for the project. This should be consistent with the Delegation section of the PSCP. It should state, which conformity inspections will be conducted, delegated to Designees, and how deviations will be dispositioned. A system should be established to:

- Maintain custody of conformed articles destined for an official FAA test.
- Notify FAA Aviation Safety Inspector of any changes to ground/flight test articles after conformity inspection has been completed.

- Ensure requests are not duplicated and the timely and efficient conduct of conformities and dispositioning of deviations occur.
- Identify who issues the requests, conducts the inspections, and dispositions the deviations.
- Provide for the completion of inspection, documentation, and dispositioning of deviations or changes before tests are conducted.
- Provide for timely conduct of conformity inspection at non-US suppliers.

Conformity inspections will be performed by FAA Aviation Safety Inspectors or their Designees. These inspections will be performed in response to FAA Form 8120-10 (request for conformity) issued by the FAA or their Designees. The Applicant, FAA Engineer and FAA Aviation Safety Inspector, along with their respective Designees will agree upon and document a plan by which the Designees from all disciplines can work directly together to perform conformity.

8. COMPLIANCE DOCUMENTATION

This section should describe the procedures for submittal and processing of compliance documentation. The PSCP should identify what data will be submitted and by whom. It should account for all data (not just drawings) pertinent to defining the type design, including manufacturing specifications, and to conducting the showings of compliance required for FAA certification. This would include, but is not limited to, test plans, test reports, test setup schematics, test instrumentation, drawings, analyses (e.g., stress, safety, damage tolerance), material or process specifications, manuals. The Applicant will submit one copy of the data with each FAA Form 8110-3 (original and copy). Data submitted without an FAA Form 8110-3 will require FAA Engineering review and approval which may add to the processing time. This should be taken into account when developing the project schedule.

The FAA and Applicant will agree and document the amount of time needed for review, disposition, and approval or acceptance of the data, as appropriate. Typically this may be up to four (4) weeks for Designee recommended approval data. Some submittals due to size or complexity may require more time such as. Instructions for Continued Airworthiness, safety analyses. The timing and process for such submittals should be agreed between the FAA and Applicant and documented in the PSCP. Data submittals that are Designee approved are reviewed only for Designee oversight purposes, whereas data that is recommended approval must be reviewed for those aspects that the Designee could not or did not evaluate. Hence, communication and pre-planning for data submittal and consideration of the level of delegation between Designees and FAA is essential and encouraged to ensure timely efficient data approval.

PRODUCTION CERTIFICATION

This section of the PSCP should outline production quality project issues and how they will be managed to permit early approval of the production system. The goal is to have concurrent design and production approval issuance. The primary focal points for the production approval process are the FAA Principal Aviation Safety Inspector and the Applicant's Project Quality Manager. Production approval is granted after the Applicant has demonstrated, and the FAA has verified, that the Applicant has developed and is capable of maintaining a quality assurance system. This system will assure that only products and parts conforming to the design data are released for commercial service use. For existing Production Approval Holders (PAH) who will

be adding a new product to an existing approved production system, issues to be considered should include:

- Approval of new materials, new processes, new suppliers, co-production agreements, new technologies or new applications of existing technology, etc.
- FAA undue burden assessment of non-US suppliers and/or co-producers
- Instructions for assembly and test of the final product to assure conformance
- Coordination with Engineering on production Material Review Board requirements and integrating engineering and production Certificate Management activities
- Controls to be placed on production as a result of design Airworthiness Limitations or the criticality of parts and components
- Configuration control requirements
- Any other reviews necessary to assure that a conforming product will be produced under the FAA approved quality inspection system

In addition, for Applicants who do not hold an existing production approval for the type of product which is being certificated under this PSCP, the Applicant must demonstrate, to the satisfaction of the FAA, the existence of and compliance to a quality system which satisfies ALL the requirements of the applicable subparts of FAR Part 21.

POST CERTIFICATION REQUIREMENTS

1. COMPLIANCE SUMMARY DOCUMENT

The Applicant and FAA PMs will prepare a summary at the end of each certification project to capture and retain the corporate knowledge learned during the project. The summary should capture only unique data, precedent issues (e.g., regulatory, policy, or technical), and both the Applicant and FAA perspectives, feedback, and lessons learned. This document is not to be a complete history of the project, but should only document those areas out of the ordinary that require process improvements, affect rule/policy making, etc. in order to provide continuous improvement of the FAA and Applicant's working relationship. This summary plus the project evaluation forms should be evaluated by the team and appropriate changes to the PSP or future PSCPs should be made. When the team identifies where changes to the Guide would be beneficial those should be referred to AIR-100 for consideration.

2. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA)

Except for the Airworthiness Limitations, the Instructions for Continued Airworthiness may be incomplete at the time of Type Certification. However, a program must be in place to insure they are complete prior to issuance of the standard airworthiness certificate or delivery of the first aircraft.

3. CONTINUED AIRWORTHINESS MANAGEMENT

The details of how the FAA and Applicant will handle continued airworthiness issues, after delivery of the first aircraft or issuance of the standard airworthiness certificate, will be agreed and documented. This will be consistent with the FAR and FAA policy on certificate management, reporting, self-disclosure and the requirements for implementing corrective actions in both the type design and production systems.

PROJECT ISSUE PLANNING

The Applicant and FAA PMs will jointly maintain a project issues tracking list. This list, at a minimum, should include issues identified as potential “show-stoppers.” The list will identify the issue, the plan and milestones for their resolution, as well as the primary responsible team member for assuring the closure of each issue within the operating norms of the project schedule. The PMs will continually manage those issues to assure adequate progress is being made on their resolution so as to not adversely affect the project schedule. The PMs will identify to their management and other appropriate team members, concerns and problems with open issues and seek early resolution of any items not proceeding according to the agreed PSCP. A specific issue resolution process example is shown in the PSP. (Appendix I of *The FAA and Industry Guide to Product Certification*) The process as defined in a PSP may be incorporated by reference in the PSCP or a specific process could be included here to meet any unique needs of the particular project.

CONTINUOUS IMPROVEMENT

1. GENERAL

Continuous improvement applies to all elements of the PSP, the PSCP, and all Phases of projects. This can be accomplished by applying the “Criteria for Success” that are defined in the Guide. The FAA and Applicant's Team must provide proper levels of technical project and management leadership with frequent reviews to ensure all are aware of project status, significant issues, and that commitments are met. The Team should always document clear time frames, expectations, agreements, schedules, milestones, action item assignments, compliance/conformance submittals and approvals deadlines, and decisions. This will help foster an environment of mutual trust, confidentiality, and empowerment.

2. PERFORMANCE MEASURES

(a.) GENERAL

The performance measures for the project will be provided in this section . It defines the agreed norms, and how they will be accomplished in accordance with the PSP elements in the Performance Measurement section. Other factors could also be considered for performance measures in addition to deliverables listed in the PROJECT SCHEDULE section above. These could include, where appropriate, interpersonal relationship measures and leadership principles. .

(b.) OPERATING NORMS

Each FAA Directorate will establish with the Applicant, agreed, documented, operating norms consistent with the PSP. Those norms will guide the timeliness and quality of products and services delivered by both the FAA and Applicant during the conduct of the project. Examples of metrics for measuring performance could include parameters such as meeting schedule milestones, quality of submittals, issues resolved, task re-accomplishment and performance against other operating norms.

(c.) PROJECT EVALUATION FORMS

The Project Evaluation Forms (Appendix III of this Guide) are tools used for project management during the appropriate Phases. The FAA and Applicant Project Managers (PMs) should jointly prepare a Project Evaluation Form at the close of appropriate Phases of a project. These forms

should be continuously evaluated by the Applicant/FAA team for immediate process improvement. The PMs are encouraged to include the completion of the Project Evaluation Forms as milestones when preparing their PSCP schedule. During initial implementation, a FAA/AIA/GAMA Product Certification Continuous Improvement Steering Committee will review all project evaluation feedback on current projects and recommend Guide changes for continuous improvement. To facilitate continuous improvement any necessary corrective actions should be implemented by the Team and the Project Evaluation Forms should be maintained in the official project file for future national or local program evaluation. When the evaluation identifies the need for corrective actions or improvements it should be included as a part of the Compliance Summary Document for future reference.

SIGNATORIES

The FAA and Applicant agree to the provisions of this PSCP as indicated by the signature of their duly authorized representatives.

Agreed by: (This is a representative sample of possible signatories and could include others deemed appropriate to provide necessary commitments and accountability. Include Names and date)

Applicant Certification Manager

FAA ACO Manager

Applicant Project Manager

FAA Project Manager

Applicant Project Quality Manager

FAA MIDO Manager(s)

FAA Designee(s)

FAA Principal Inspector

FAA Standards Staff Manager

FAA Standards Staff Project Officer

FAA AEG Inspector(s)

APPENDIX III

Project Evaluation Forms

The Project Evaluation Forms are a tool used for project evaluation during the appropriate Phases. The FAA and Applicant Project Managers (PMs) should jointly prepare a Project Evaluation Form at the close of each Phase of a Product Certification. These forms should be continuously evaluated by the Applicant/FAA team for immediate process improvement. The PMs are encouraged to include the completion of the Project Evaluation Forms as milestones when preparing their PSCP schedule. During initial implementation of this Guide, a FAA/AIA/GAMA Product Certification Continuous Improvement Steering Committee will review all Project Evaluation Form feedback on certain initial projects and recommend Guide changes for continuous improvement. To facilitate continuous improvement, the Project Evaluation Forms should be maintained in the official project file and included as a part of the Compliance Summary Document for future national or local program evaluation.

**PROJECT EVALUATION FORM
PHASE I: PARTNERSHIP FOR SAFETY PLAN**

Project Name: _____

FAA Project Number: _____

Project Managers:

Names: Applicant: _____ **FAA:** _____

Company: _____ **Office:** _____

Were the following Deliverables completed? (check where applicable):

- Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments
- Signed PSP

Answer the following questions appropriate to this Phase (attach separate sheets as needed):

Ph1	Questions
n/a	1 Were the PSCP milestones based on the norms?
n/a	• If not within the norms, Why?
n/a	2 Were the milestones periodically validated and mutually readjusted by the PSCP signatories throughout the program as needed?
n/a	3 Were the final milestones met?
n/a	4 Was the delegation plan followed?
n/a	• What worked well?
n/a	• What didn't work well?
x	5 Was the Issue Resolution Process established/applied as needed?
x	• What worked well?
x	• What didn't work well?
x	6 Changes required for next Phase?
x	• If yes, explain action needed.

**PROJECT EVALUATION FORM
PHASE II: CONCEPTUAL DESIGN AND STANDARDS**

Project Name: _____

FAA Project Number: _____

Project Managers:

Names: Applicant: _____ **FAA:** _____

Company: _____ **Office:** _____

Were the following Deliverables completed? (check where applicable):

Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments

Preliminary certification basis considering the intended means of compliance, initial safety assessments, and relevant policy material and begin formulation of PSCP

Definition and plan for resolution of critical issues such as new designs, technology or processes; potential special conditions, exemptions or equivalent safety findings; co-production or foreign supplier arrangements requiring undue burden assessments; etc. as appropriate

Identify core team for commitment to developing the preliminary PSP elements to ensure continuity

Answer the following questions appropriate to this Phase (attach separate sheets as needed):

Ph2	{PRIVATE }Questions
n/a	1 Were the PSCP milestones based on the norms?
n/a	• If not within the norms, Why?
n/a	2 Were the milestones periodically validated and mutually readjusted by the PSCP signatories throughout the program as needed?
n/a	3 Were the final milestones met?
n/a	4 Was the delegation plan followed?
n/a	• What worked well?
n/a	• What didn't work well?
x	5 Was the Issue Resolution Process established/applied as needed?
x	• What worked well?
x	• What didn't work well?
x	6 Changes required for next Phase?
x	• If yes, explain action needed.

**PROJECT EVALUATION FORM
PHASE III: REFINED PRODUCT DEFINITION AND
RISK MANAGEMENT**

Project Name: _____

FAA Project Number: _____

Project Managers:

Names: Applicant: _____ **FAA:** _____

Company: _____ **Office:** _____

Were the following Deliverables completed? (check where applicable):

Submission of Application, FAA Form 8110-12 (FAA Order 8110.4)

Acknowledgment of Application

Certification Project Notification (FAA Order 8110.4) and Establishment of Project

Establishment of FAA and Applicant Certification Team

Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments

Preliminary PSCP including project milestones and related events such as program status reviews (See Appendix II)

Agreement of TC Certification Basis plan and definition of project issues such as means of compliance including special conditions, equivalent safety findings, exemptions, etc.

Answer the following questions appropriate to this Phase (attach separate sheets as needed):

Ph3	Questions
x	1 Were the PSCP milestones based on the norms?
x	• If not within the norms, Why?
x	2 Were the milestones periodically validated and mutually readjusted by the PSCP signatories throughout the program as needed?
x	3 Were the final milestones met?
n/a	4 Was the delegation plan followed?
n/a	• What worked well?
n/a	• What didn't work well?
x	5 Was the Issue Resolution Process established/applied as needed?
x	• What worked well?
x	• What didn't work well?
x	6 Changes required for next Phase?
x	• If yes, explain action needed.

**PROJECT EVALUATION FORM
PHASE IV: CERTIFICATION PROJECT PLANNING**

Project Name: _____

FAA Project Number: _____

Project Managers:

Names: Applicant: _____ **FAA:** _____

Company: _____ **Office:** _____

Were the following Deliverables completed? (check where applicable):

- Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments
- Signed PSCP (See Appendix II)
- Project schedule with established FAA/Applicant milestones for completion of analyses, test plan submission, TIA, conformities, flight test, AEG evaluations, critical issues resolution plan, and other items affecting the completion of the project
- Agreed Type Certification Basis
- Compliance Checklist
- Completion of Stage 1 on all issue papers
- Identification of stakeholders, including suppliers, installers in the case of engines, propellers, or systems, etc.
- Delegations defined with oversight criteria
- Resource Requirements
- Conformity Procedures
- Project evaluation measures

Answer the following questions appropriate to this Phase (attach separate sheets as needed):

Ph4	Questions
x	1 Were the PSCP milestones based on the norms?
x	• If not within the norms, Why?
x	2 Were the milestones periodically validated and mutually readjusted by the PSCP signatories throughout the program as needed?
x	3 Were the final milestones met?
N/a	4 Was the delegation plan followed?
N/a	• What worked well?
N/a	• What didn't work well?
x	5 Was the Issue Resolution Process established/applied as needed?
x	• What worked well?
x	• What didn't work well?
x	6 Changes required for next Phase?
x	• If yes, explain action needed.

**PROJECT EVALUATION FORM
PHASE V: CERTIFICATION PROJECT MANAGEMENT**

Project Name: _____

FAA Project Number: _____

Project Managers:

Names: Applicant: _____ **FAA:** _____

Company: _____ **Office:** _____

Were the following Deliverables completed? (check where applicable):

Meeting minutes and correspondence to document decisions, agreements, and action item assignments

Meet milestones for completion of analyses, test plan submission, TIA, conformities, flight test, AEG evaluations, critical issues resolution plan, and other items affecting the completion of the project

Completed test plans/reports, conformity requests, inspections, and compliance documentation

Issue Papers, Special Conditions, Exemptions, Equivalent Safety Findings

Compliance and conformance findings

Type Design and Production approval issuance

Answer the following questions appropriate to this Phase (attach separate sheets as needed):

Ph5	Questions
x	1 Were the PSCP milestones based on the norms?
x	• If not within the norms, Why?
x	2 Were the milestones periodically validated and mutually readjusted by the PSCP signatories throughout the program as needed?
x	3 Were the final milestones met?
x	4 Was the delegation plan followed?
x	• What worked well?
x	• What didn't work well?
x	5 Was the Issue Resolution Process established/applied as needed?
x	• What worked well?
x	• What didn't work well?
x	6 Changes required for next Phase?
x	• If yes, explain action needed.

**PROJECT EVALUATION FORM
PHASE VI: POST CERTIFICATION**

Project Name: _____

FAA Project Number: _____

Project Managers:

Names: Applicant: _____ **FAA:** _____

Company: _____ **Office:** _____

Were the following Deliverables completed? (check where applicable):

Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments

Compliance Summary Document

Type Inspection Report

Instructions for Continued Airworthiness

Continued Airworthiness Management Plan

Answer the following questions appropriate to this Phase (attach separate sheets as needed):

Ph6	Questions
x	1 Were the PSCP milestones based on the norms?
x	• If not within the norms, Why?
x	2 Were the milestones periodically validated and mutually readjusted by the PSCP signatories throughout the program as needed?
x	3 Were the final milestones met?
x	4 Was the delegation plan followed?
x	• What worked well?
x	• What didn't work well?
x	5 Was the Issue Resolution Process established/applied as needed?
x	• What worked well?
x	• What didn't work well?
x	6 Changes required for next Phase?
x	• If yes, explain action needed.

APPENDIX IV GLOSSARY AND ACRONYMS

GLOSSARY

Certification Basis: The applicable airworthiness, aircraft noise, fuel venting and exhaust requirements of the Federal Aviation Regulations as established in §§ 21.17, 21.101, and 21.115, as appropriate; special conditions; equivalent level of safety findings; and, exemptions to which the Applicant must show compliance.

Criteria for Success: Attributes that are expected in the successful completion of each Phase.

Deliverables: Items to be produced during any particular Phase of the Product Certification Process by either the FAA, Designees, or the Applicant.

Designee: For the purposes of this Guide, Designee includes consideration of organizational delegations as well as delegations to individuals.

Key Players: Accountable FAA, FAA Designees, and Applicant personnel required for successful completion of any particular Phase of the Product Certification Process.

Partnership for Safety Plan: The high level standing Plan of how the FAA and the Applicant will work and interact together. It sets the expectations and needs of both parties for the relationship. It is not a legally binding agreement but a mutual statement the intent of the FAA and the Applicant to hold their respective personnel accountable for building the professional working relationships and business practices upon which successful product certification projects are built.

Product Certification: The complete certification cycle that includes type certification (design approval), production certification (production approval), airworthiness certification (airworthiness approval) and continued airworthiness management.

Project Specific Certification Plan: A Plan that addresses the specific issues of a specific project. It sets the expectations for the project. It is not a legally binding agreement but a mutual statement the intent of the FAA and the Applicant to hold their respective personnel accountable for the success of the project.

Type or Significant Supplemental Type Certificate Project: (For the purposes of this document)

Any new type certificate application.

Any application for amended type certificate or new/amended supplement type certificate in which:

- The design appears to require special conditions, exemptions, or equivalent safety findings or a certification basis derived from an unusual application of 14 CFR §§ 21.101(a)(2) or 21.101(b).
- The design uses novel or unusual methods of construction.
- The design changes the kinematics, dynamics, or configuration of either the flight control system or rotor drive system.

- The design change would substantially alter the aircraft's flight characteristics.
- The design affects an area that has been the subject of a major service difficulty, accident, or airworthiness directive action.
- The aircraft design changes the engine configuration from reciprocating to turbopropeller or turbojet powered.
- The integrity of the basic load-bearing structure necessary for continued safe flight and landing or operation of the aircraft within approved limits is affected.
- The design consists of new state-of-the-art systems of components that have not been previously certificated or for which adequate certification criteria have not been published.
- The certification is likely to be controversial or highly visible.
- Other significant projects or amendments as defined in FAA Order 8110.4.

ACRONYMS

ACO	- Aircraft Certification Office
AEG	- Aircraft Evaluation Group
AIR	- Aircraft Certification Service
AFM	- Aircraft Flight Manual
AFS	- Flight Standards Service
AIA	- Aerospace Industries Association
CEO	- Chief Executive Officer
FAA	- Federal Aviation Administration
FAR	- Federal Aviation Regulations
FMEA	- Failure Modes and Effects Analysis
GAMA	- General Aviation Manufacturer's Association
MIDO	- Manufacturing Inspection District Office
MIO	- Manufacturing Inspection Office
NRS	- National Resource Specialists

- PM** - Project Manager
- PSCP** - Project Specific Certification Plan
- PSP** - Partnership for Safety Plan
- R&D** - Research and Development
- STC** - Supplemental Type Certification
- TC** - Type Certification or Type Certificate
- TIA** - Type Inspection Authorization
- VP** - Vice President

End