The FAA and Industry Guide to Product Certification:

Partnership for Safety Plans and Project Specific Certification Plans

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♦ Second Edition (Sept 2004) Incorporates
  - The FAA and Industry Guide to Product Certification (Jan 1999)
  - The FAA and Industry Guide to Avionics Approvals (April 2001)
CPI Guide - Background

Program Experiences

- Failure to Reach Agreement/Understanding of Certification Basis and Methods of Compliance
- New Requirements (Policy) Introduced to Program
- Inconsistent Utilization of Available Delegation
- Issues Remain Open Late or After Program
- Increasing Cycle Time for Certification Approvals
- Not Meeting Industry Business Needs/Schedules

Impact on Both Industry & FAA

- Increasing Time, Increasing Cost, Increasing Resources
- Need to Better Focus on Safety & Compliance
The CPI Guide is the Result of FAA and Industry Commitment to Improve Certification Process Effectiveness and Efficiency

- Compilation & Enhancement of Best Business and Certification Practices
- More effective use of FAA and Industry resources
- Oversight focused on critical safety areas
- Increase safety by creating a smoother, less erratic path
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
CPI Guide – Principles

How to plan, manage, and document an effective, efficient product certification process and working relationship between the FAA and an Applicant

- Early FAA Communication and Involvement
- Detailed Certification Planning & Schedule
- Issues Resolution Process
- Accountability
CPI Tools

- PSP – Partnership for Safety Plan
- PSCP – Project Specific Certification Plan
- Phase Evaluation Checklists
- Avionics CPI
  - Avionics PSP
  - Avionics PSCP
  - TSOA PSCP
  - STC PSCP
Use of CPI and PSCP

- 8100.5A Aircraft Certification Service Mission, Responsibilities, Relationships, and Programs
  - CPI should be used by the FAA and applicants for type certification, significant supplemental type certification, significant amendments to TCs and STCs, and production approval
Use of CPI and PSCP

- **Order 8110.4C Type Certification**
  - The PSCP is the primary project management tool for coordinating activities between the FAA and applicants choosing to implement the techniques and guidance described in *The FAA and Industry Guide to Product Certification*.
  
  - The PSCP combines information from the applicant’s certification plan and the FAA’s CPP with additional project details to support an effective certification project. It is also the depository for milestones, performance measures, and information unique to the certification project.
PSP – Partnership for Safety Plan

- Defines Working Relationship Between FAA and Applicant
  - Provides foundation from which to build mutual trust, leadership, teamwork, and efficient business practices

- Corporate Planning

- Communication & Coordination

- Delegation (capability, use and oversight)

- Continuous Improvement
  - Issues Resolution
  - Performance Measures & Operating Norms
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**PURPOSE**

**EFFECTIVITY**

**PRODUCT CERTIFICATION**

1. **PROJECT DESCRIPTION**

2. **PROJECT SCHEDULE**

3. **CERTIFICATION BASIS**

4. **MEANS OF COMPLIANCE**

5. **COMMUNICATION AND COORDINATION**

6. **DELEGATION**

7. **TESTING PLAN**
   (a.) **GENERAL**
   (b.) **FLIGHT TEST**
   (c.) **CONFORMITY**

8. **COMPLIANCE DOCUMENTATION**

**PRODUCTION CERTIFICATION**

**POST CERTIFICATION REQUIREMENTS**

1. **COMPLIANCE SUMMARY DOCUMENT**

2. **INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA)**

3. **CONTINUED AIRWORTHINESS MANAGEMENT**

**PROJECT ISSUES PLANNING**

**CONTINUOUS IMPROVEMENT**

1. **GENERAL**

2. **PERFORMANCE MEASURES**
   (a.) **GENERAL**
   (b.) **OPERATING NORMS**
   (c.) **PHASE EVALUATION CHECKLISTS**

**SIGNATORIES**
PSCP Key Elements

- Early FAA/Applicant Communication
  - Not Subject to Sequencing

- Detailed Certification Planning
  - Certification Basis
  - Planned Methods of Compliance
  - Testing Plan
  - Compliance Documentation
  - Delegation Planning

- Detailed Project Schedule
  - Major Milestones, Management Reviews, Required Deliverables

- Continuous Improvement
  - Performance Measures
    - PSCP Schedule, Operating Norms, Phase Evaluation Checklists

- Accountability
CPI Implementation Experiences

- **Scalability/Flexibility**
  - Applicant/ACO Can Apply as Appropriate

- **Delegation Plan**
  - Timeliness of Agreement
  - Effectiveness of defining scope of a project early enough
  - Requirement for Specific Names (for ODA)

- **PSCP**
  - Trend Toward More Detail Required (i.e. Test Plans)
  - Timeliness of Agreement/Signature
  
  ➤ Trend Toward “Open” PSCP Till End of Program
CPI Implementation Experiences (Cont.)

- **PSCP Schedule**
  - Application Prior to CPI “Early Discussions”
  - Completion Date is Fixed, Not Objective
  - Milestones Based on Perfect Conditions or Not Realistic

- **Performance Measures / Accountability**
  - Adherence to Agreed Schedule
  - Not Re-Planning Schedule When Needed (particularly when it affects approval date)
  - New Requirements/Policy Being Added
  - FAA Project Manager Responsibility & Authority for Project Deliverables/Decisions (i.e. issues at Standards Staff, AEG, etc.)
Continuous Improvement

- CPI/PSP Includes Continuous Improvement and Issues Resolution Feedback Loops
  - Partnership Should Hold Each Other Accountable
    - Business Needs Often Lead to Acceptance (Capitulate) at Project Level, But Issues Should be Addressed
- ODA Improvement Action Plan
  - Tools for Certification & Delegation Plan Content
  - Project Performance Metrics/Accountability
- Revision/Updates to Order 8110.4 and CPI Guide
  - Industry and Field Office Input
- FAA Aircraft Certification Process Review and Reform Report
  - Congressional Direction to Implement Improvements to Certification Process Effectiveness & Efficiency
Discussion / Questions