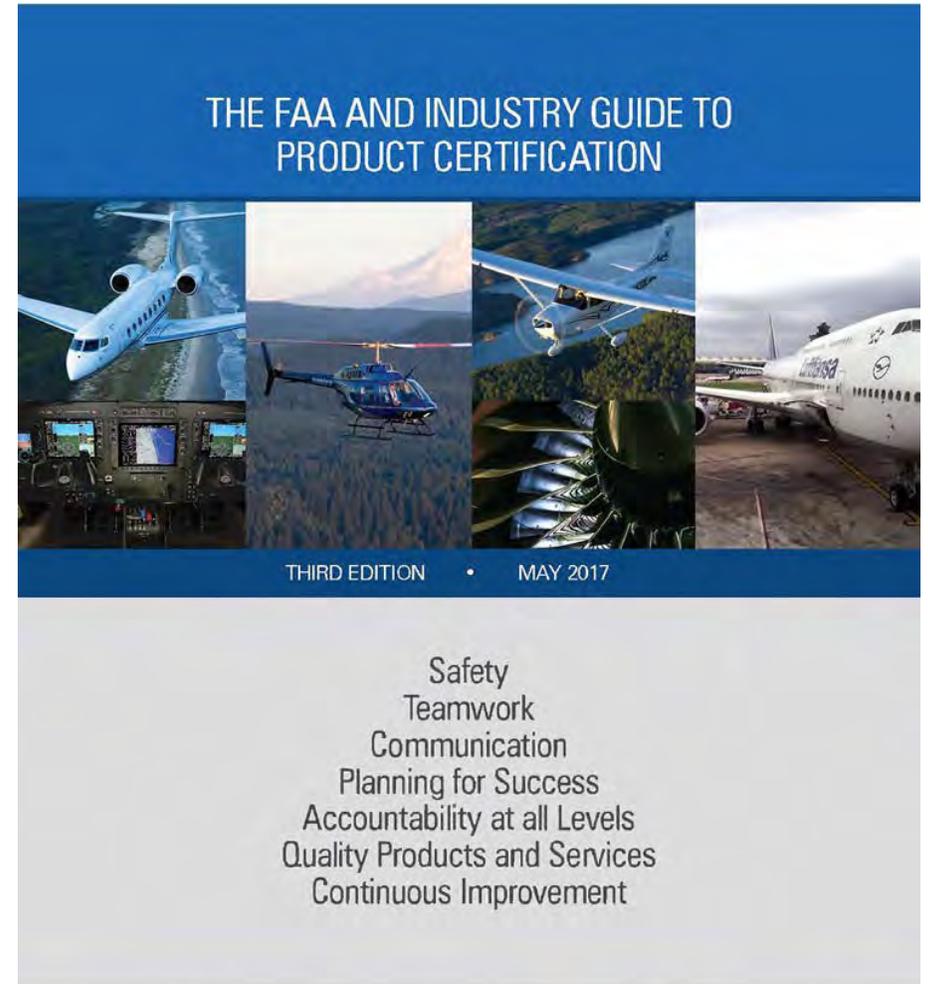


# FAA and Industry Guide to Product Certification

A.K.A. CPG (Certification Process Guide)

## Overview Module



Prepared by AIA, AEA, GAMA, and the FAA Aircraft Certification Service and Flight Standards Service



# Why am I here?

## The Guide:

- Is applicable to all Applicants and projects, regardless of size or complexity
- Supports a transition to a state where there is progressively less direct involvement of the FAA in the compliance activities of the Applicant

By applying the principles of this Guide, the FAA and Industry can lay a foundation to:

- Build mutual trust
- Enhance leadership
- Increase teamwork
- Develop best certification practices and
- Mature Applicant certification competencies



# What's Different about the Third Edition?

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Shift from “Inspirational” to “Instructional”

Adds emphasis on accountability and expectations

Adds emphasis on systems oversight approach

Reflects current delegation systems/organizations

Emphasis on Project Management Principles

Updated Guidance on Partnership for Safety Plans

# What is the purpose of CPG (3<sup>rd</sup> edition)?

To establish the principles and guidance for how an Applicant and the FAA can begin a transition to a state where there is progressively less direct involvement of the FAA in the compliance activities of the Applicant.

**“This revision to the Guide does not change what we do; rather it changes how we do it.” Kevin Hull, LA-ACO Mgr. Retired**



# Accountability Framework is Key

*In the current show/find process, the FAA is involved, either directly or through their designees, in nearly 100 percent of all discrete compliance activities but this is not required. The FAA may rely on an Applicant's showing and not make a discrete finding based on demonstrated capability or accepted processes.*

## • *Applicants*

- *have full responsibility (legal and regulatory) for compliance with all applicable requirements.*
- *Showing of Compliance and Certifying Statement of Compliance, provides clear guidance on the intent of the accountability framework.*

## • *The FAA Administrator:*

- *has the obligation to promote safe flight of civil aviation*
- *meets this obligation by exercising their discretion in promulgating airworthiness regulations and standards in the interest of safety*
- *By defining by regulations and directives how the FAA will oversee compliance by those it regulates.*

## • *FAA:*

- *exercises its discretion on the level of involvement necessary to make a finding that the Applicant has shown compliance with all the applicable requirements before issuing a design approval.*

# CPG Expectations

- Clarifying Applicant and FAA responsibilities during the certification process
- Maturing applicants to a state where they have procedures that consistently produce compliant and conforming products through:
  - a systems approach to product approval
  - reduced reliance on FAA engineers, inspectors, and designee findings
- Supporting continued airworthiness following certification

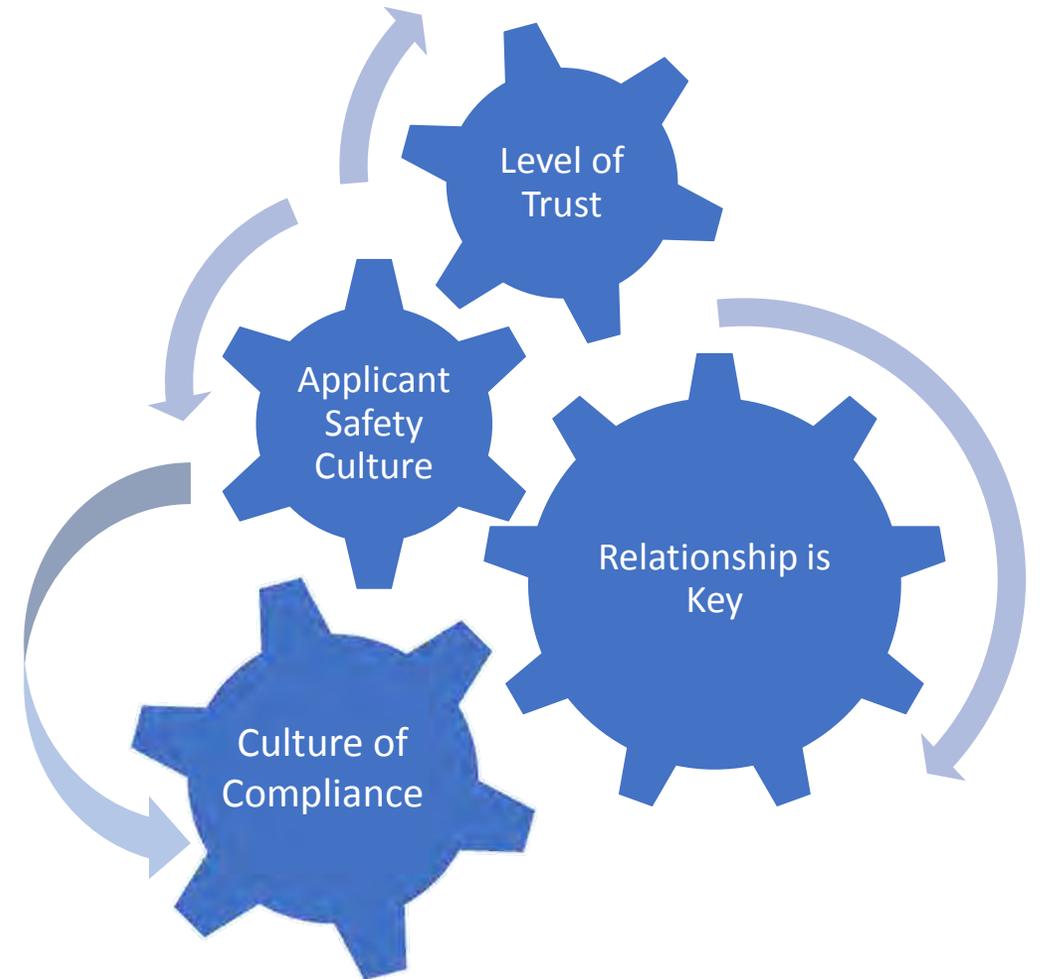


# Principles of CPG

- ❖ *Foster Relationships*: The FAA and applicant pursue a relationship based on open communication and clear expectations that result in more efficient certification processes.
- ❖ *Promote Accountability*: Both the applicant and the FAA are accountable to one another in fulfilling their roles in the certification process with the expectation of providing quality products and services along the way.
- ❖ *Provide Quality Guidance*: The FAA supports applicant success by providing quality guidance for developing clear and effective certification plans.
- ❖ *Increase Applicant Maturity*: The applicant is committed to continuously improving and maintaining their compliance and continued airworthiness processes. The applicant commits to a systems approach to compliance.
- ❖ *Enable Appropriate Level of Involvement*: The FAA is committed to continuously increasing its ability and willingness to exercise its discretionary role in a risk-based manner, moving toward a systems approach to oversight.

# Systems Approach to Certification

- Applicant and FAA Relationship:
  - Norms and expectations established in a jointly developed Partnership for Safety Plan (PSP)
  - Specific Action Plans to continuously improve
- Applicant develops:
  - Safety Culture that encourages identification and resolution of issues in a constructive manner
  - Culture of compliance utilizing processes with a safety focus that efficiently yields compliant products
- FAA Level of Trust:
  - Recognizes mature Applicant processes
  - Increasingly relies on oversight of processes and risk-based project involvement



# Enhanced Leadership



- FAA and Applicant Management:
  - Commit to the Partnership for Safety Plan
  - Provide Leadership and Resources
  - Jointly orchestrate the project
  - Apply Partnership for Safety Plan agreements
- Commit to an effective dispute resolution process:
  - Resolve issues at the lowest possible level
- Buy-in at all levels of FAA and Applicant management
- The PSP must identify that:
  - the Applicant understands its responsibilities when applying for a product certification or approval,
  - the FAA's commitment to support the Applicant's certification or approval objectives, and
  - schedules are mutually agreed upon and account for both FAA and Applicant cycle times.

# Build & Maintain Trust

- The PSP is intended to improve the working relationship by documenting process agreements
- FAA Culture
  - Oversight of the processes that ensure compliance and acceptance of the Accountability Framework.
  - Optimal delegation based on a risk-based approach
  - Working collaboratively with the Applicant
  - Empowering employees to make decisions without fear of retribution or criticism
- Applicant Culture
  - Acceptance of the Accountability Framework
  - Embedding conformity & compliance requirements into the design & development process
  - Empowering employees to make decisions without fear of retribution or criticism

## The Value of Trust



## Return on Influence

# Foster Teamwork

- Use the Guide to build a structure to ensure:
  - Clearly defined and understood roles, responsibilities
  - Accountability of all stakeholders
- Define processes (such as regularly scheduled program status reviews) to facilitate collaboration
- Develop a cooperative working relationship



# Develop Efficient Business Practices

01

Utilize Continuous Improvement methodologies to make improvements to processes as well as resolving issues.

02

Capture lessons learned from one project to make improvements in the next project

03

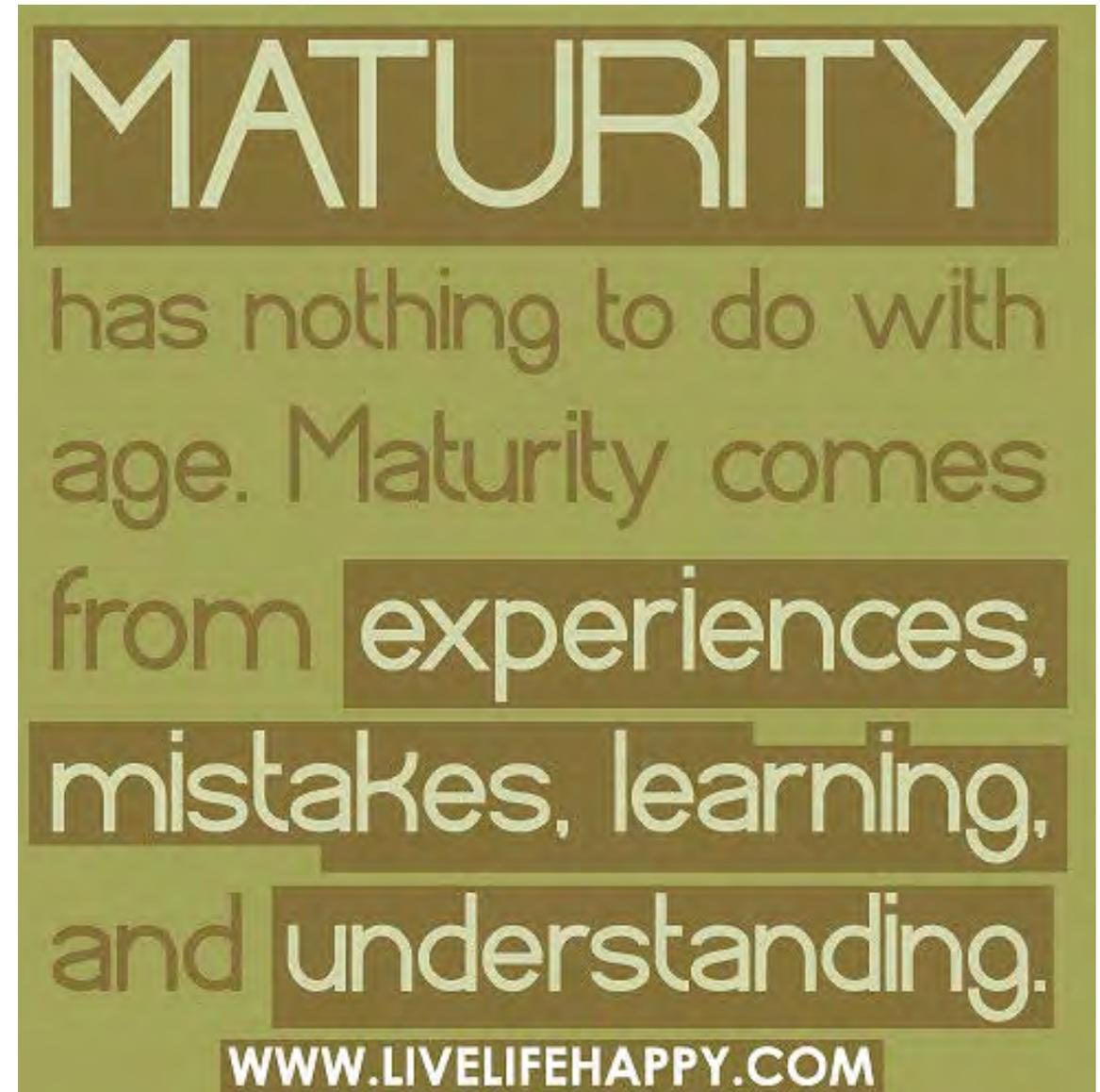
Implement a Comprehensive and effective self-audit process to increase compliance maturity level

04

Schedule program status reviews to enable early identification and resolution of issues

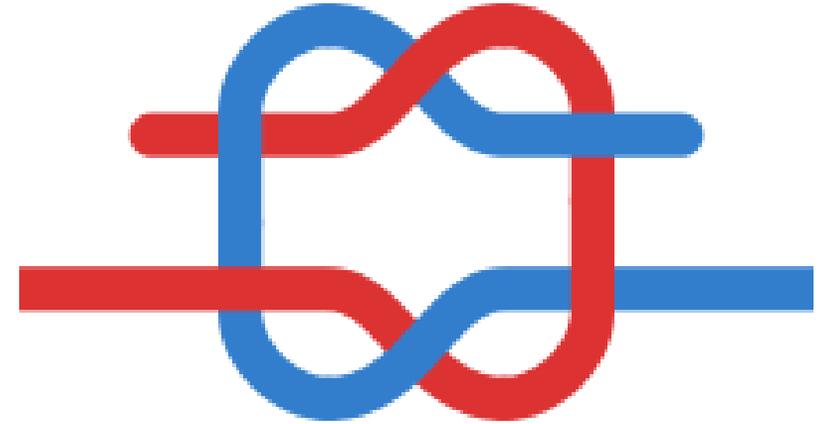
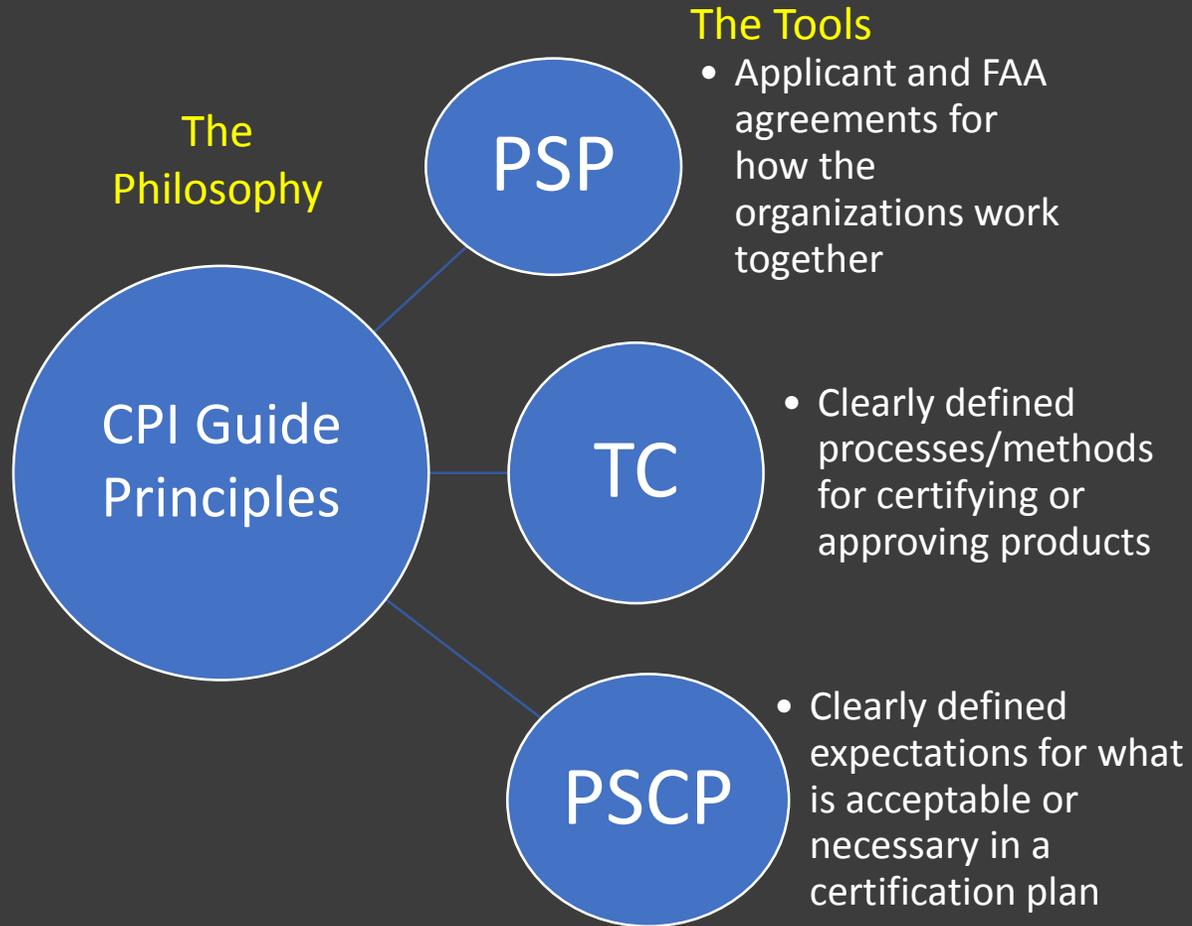
# Mature Certification Competencies

- Compliance maturity is a measure of the ability of an Applicant to perform the required compliance activities with a minimum level of FAA involvement
- Maturity requires:
  - Acceptance being accountable for complying with the requirements
  - Continually improving processes to reduce FAA involvement
  - A shift to a systems approach to certification
- An efficient and effective product certification process ensures:
  - Optimal delegation using a risk based approach
  - Maximum use of the Applicant's showing of compliance



The mutual goal of the FAA and applicants is to meet or exceed this vision of improved certification.

# Tying it all Together



# Partnership for Safety Plan (PSP)

The PSP agreements:

- Developed jointly by the FAA and the Applicant
- Improve effectiveness and efficiency by focusing on making compliance routine
- Content varies depending on certification experience and/or level of interaction
- Evolve as the Applicant develops mature certification processes and capabilities
- Are living documents that are jointly (FAA and Applicant) reviewed and updated



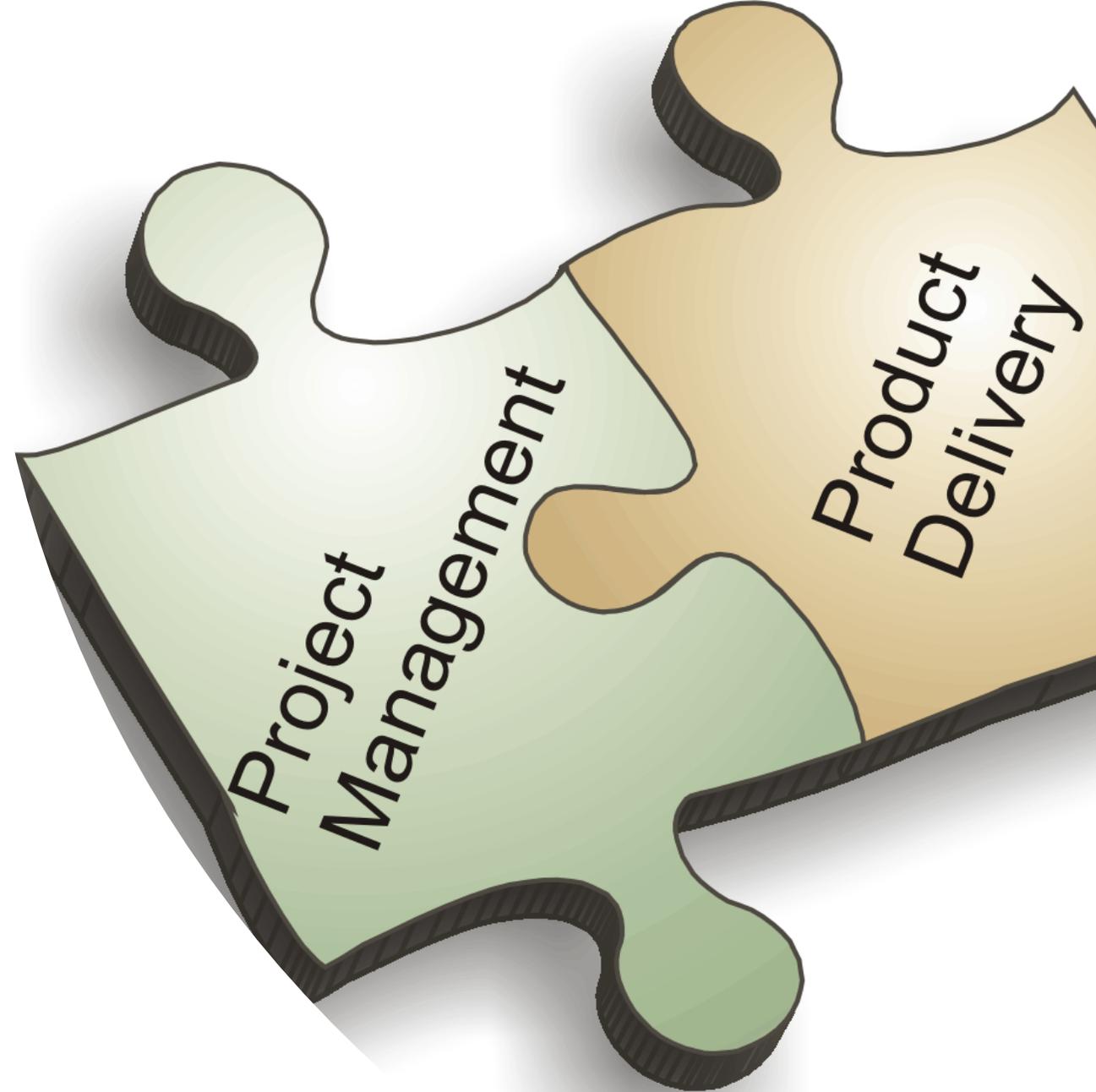
The PSP is a written “umbrella” agreement between the FAA and the Applicant that focuses on high level objectives such as open and effective communication

# Project Specific Certification Plan (PSCP)

- The PSCP:

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  - is a key tool in meeting 14 CFR part 21 requirements
  - provides definition of the product and its compliance requirements
  - designed to be used as a project management tool, with gates, performance measures, and information unique to the certification project
- Applicant shows compliance following this accepted plan
- Changes to design scope, certification basis or means of compliance will result in PSCP changes that may require re-acceptance of the PSCP





## Type Certification Process

# Performance Metrics

- Jointly established process for measuring the performance and partnership
  - Applicant's completion of scheduled activities
  - FAA's Level of Project Involvement (LOPI)
  - Timeliness of completing project deliverables
  - FAA's execution to the agreed to norms





- Review the FAA plans for the future described in the AIR Transformation presentations:  
[https://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/offices/air/transformation/](https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/air/transformation/)
- Review the CPG Guide on the FAA Website:  
[https://www.faa.gov/aircraft/air\\_cert/design\\_approvals/media/cpi\\_guide.pdf](https://www.faa.gov/aircraft/air_cert/design_approvals/media/cpi_guide.pdf)
- 8100.18 - Aircraft Certification Service Organizational Realignment References  
[https://www.faa.gov/regulations\\_policies/orders\\_notices/index.cfm/go/document.information/documentID/1031189](https://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.information/documentID/1031189)
- Contact your FAA representative for more information



Questions?

