

# FAA Aircraft Certification Service

## FAA Policy and Regulations:

### A Perspective for Foreign-Owned Manufacturers of Civil Aircraft and Aircraft Parts in the United States

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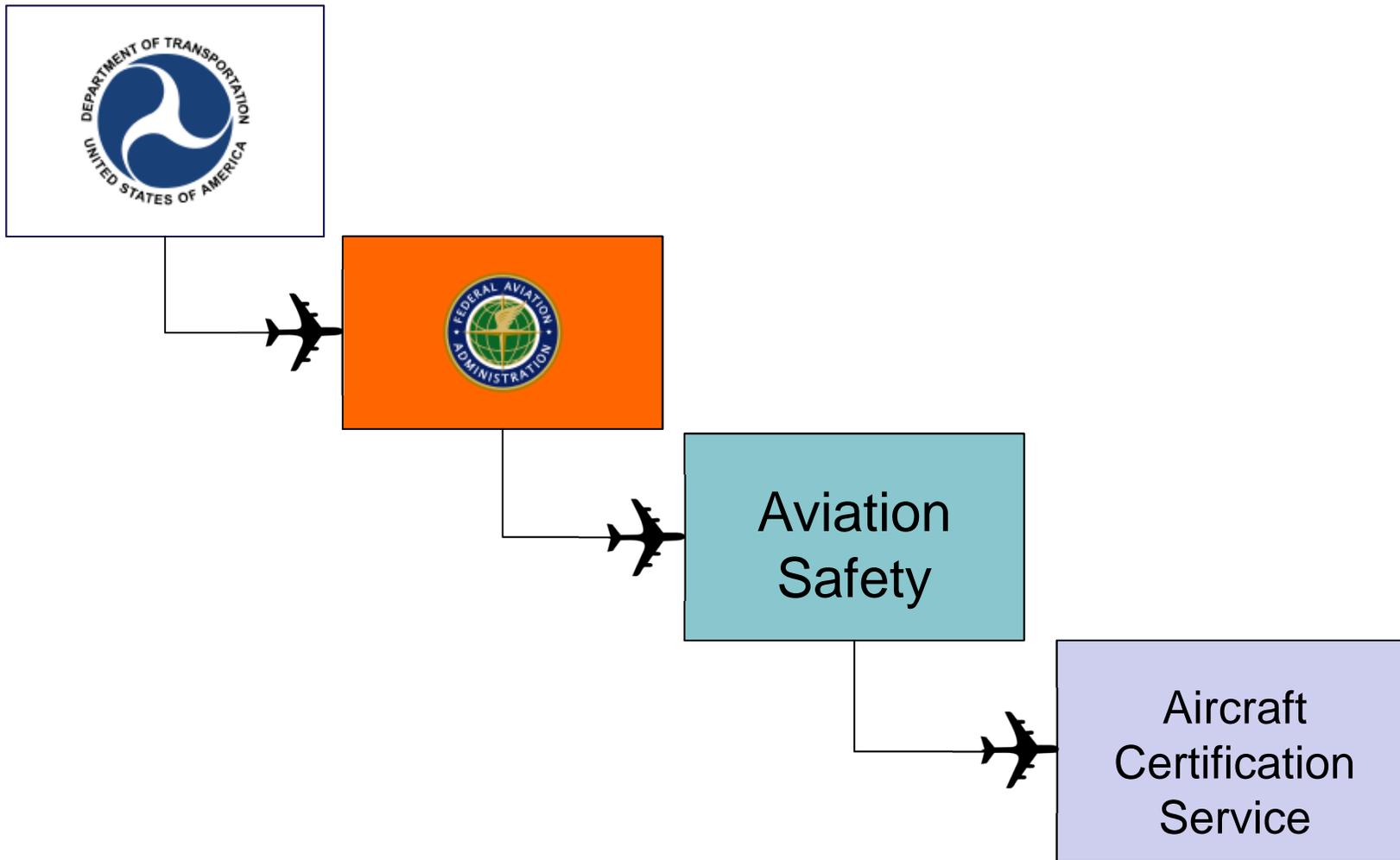
Date: October 27-28, 2015



Federal Aviation  
Administration



# Organization of the U.S. Department of Transportation



# Aircraft Certification Service

## Focus



# Products



Part 25/26



Part 33



Part 35

Part 27/29



Part 23



Part 31



Part 21

Department of Transportation  
Federal Aviation Administration  
Aircraft Certification Service  
Washington, D.C.
TSO-C155B  
Effective  
Date: 09/05/97

**Technical Standard Order**

Subject: Recorder Independent Power Supply (RIPS)

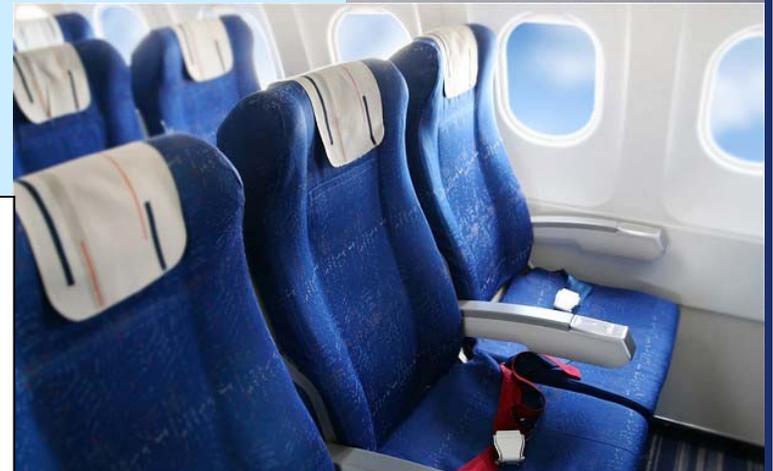
**1. PURPOSE.** This technical standard order (TSO) is for manufacturers applying for a TSO authorization (TSOA) or letter of design approval (LODA). In it, we (the Federal Aviation Administration, FAA) set out what minimum performance standards (MPS) your Recorder Independent Power Supply (RIPS) must first meet for approval and identification, with the applicable TSO marking.

**2. APPLICABILITY.** This TSO affects new applications submitted after its effective date.

- a. TSO-C155B will remain effective until 18 months after the effective date of this TSO. After that date, we will no longer accept applications for TSO-C155B.
- b. RIPS approved under a previous TSOA may still be manufactured under the previous if so signed approval.

**3. REQUIREMENTS.** New models of RIPS identified and manufactured on or after the effective date of this TSO must meet MPS, qualifications, and documentation requirements as European Organization for Civil Aviation Electronics (EUROCAE) document ED-112A, "Minimum Operational Performance Specification for Cockpit Primary Airborne Recorder Systems," dated September 2011, Chapter 5.2 and 5.3.

- a. **Functionality.** This TSO's standards apply to equipment intended to provide backup power to an installed crash-protected flight recorder.
- b. **Failure Condition Classifications.**
  - (1) Failure of the function defined in paragraph 3a is a major failure condition.
  - (2) Loss of the function defined in paragraph 3a is a minor failure condition.
  - (3) Design the system to at least three failure condition classifications.



# Appliances



Federal Aviation Administration

# International Role of the FAA

## (Title 49 U.S. Code § 40104)

The Administrator of the FAA shall encourage the development of civil aeronautics & safety of air commerce in & **outside the United States.**

The Administrator shall promote & achieve **global improvements** in the safety, efficiency, & environmental effect of air travel by exercising leadership with the Administrator's **foreign counterparts**, in the **International Civil Aviation Organization (ICAO)** & its subsidiary organizations, & other **international organizations** & with the private sector.



# Vision

## FAA Strategic Initiatives



Risk-Based Decision Making



Workforce of the Future



National Airspace System



Global Leadership



Safety



People



Organizational Excellence



Globalization



# AIR:2018 – Globalization

**AIR provides leadership to achieve a consistent level of product safety across geopolitical boundaries.**

## **STRATEGIC PRIORITIES**

- **Strong international relationships are in place with a network of partners.**
- **The full benefit of global manufacturing and seamless transfer of products and approvals is achieved through collaboration with international partners and industry.**
- **Safety initiatives are shared among international partners and promoted globally.**



# Bilateral Agreements



**Bilateral Agreements provide the legal framework that facilitates the safe import and export of aeronautical products and articles.**



# Globalization

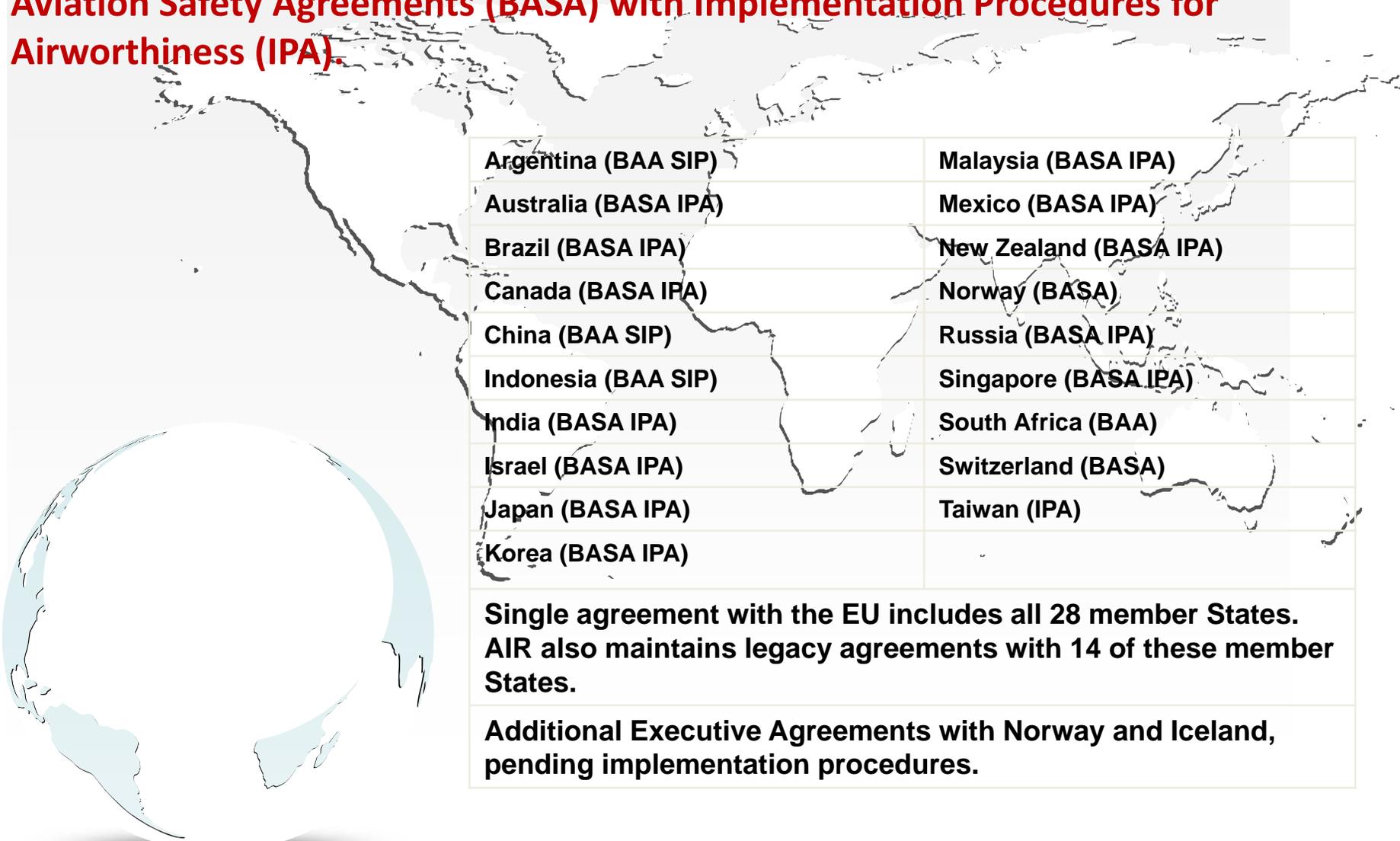
Supports our Design Approval Holders in obtaining approvals by other authorities when necessary

Streamlining acceptance of one another's products even further

- Bilateral Agreements with 47 countries (28 in European Union)
- Working Procedures with 3 countries



**AIR manages bilateral airworthiness agreements, including newer Bilateral Aviation Safety Agreements (BASA) with Implementation Procedures for Airworthiness (IPA).**



Argentina (BAA SIP)	Malaysia (BASA IPA)
Australia (BASA IPA)	Mexico (BASA IPA)
Brazil (BASA IPA)	New Zealand (BASA IPA)
Canada (BASA IPA)	Norway (BASA)
China (BAA SIP)	Russia (BASA IPA)
Indonesia (BAA SIP)	Singapore (BASA IPA)
India (BASA IPA)	South Africa (BAA)
Israel (BASA IPA)	Switzerland (BASA)
Japan (BASA IPA)	Taiwan (IPA)
Korea (BASA IPA)	
<p><b>Single agreement with the EU includes all 28 member States. AIR also maintains legacy agreements with 14 of these member States.</b></p>	
<p><b>Additional Executive Agreements with Norway and Iceland, pending implementation procedures.</b></p>	



# Global Aviation Environment

## State of Design

The State having jurisdiction over the organization responsible for the type design.



## ICAO Annex 8 – Definitions

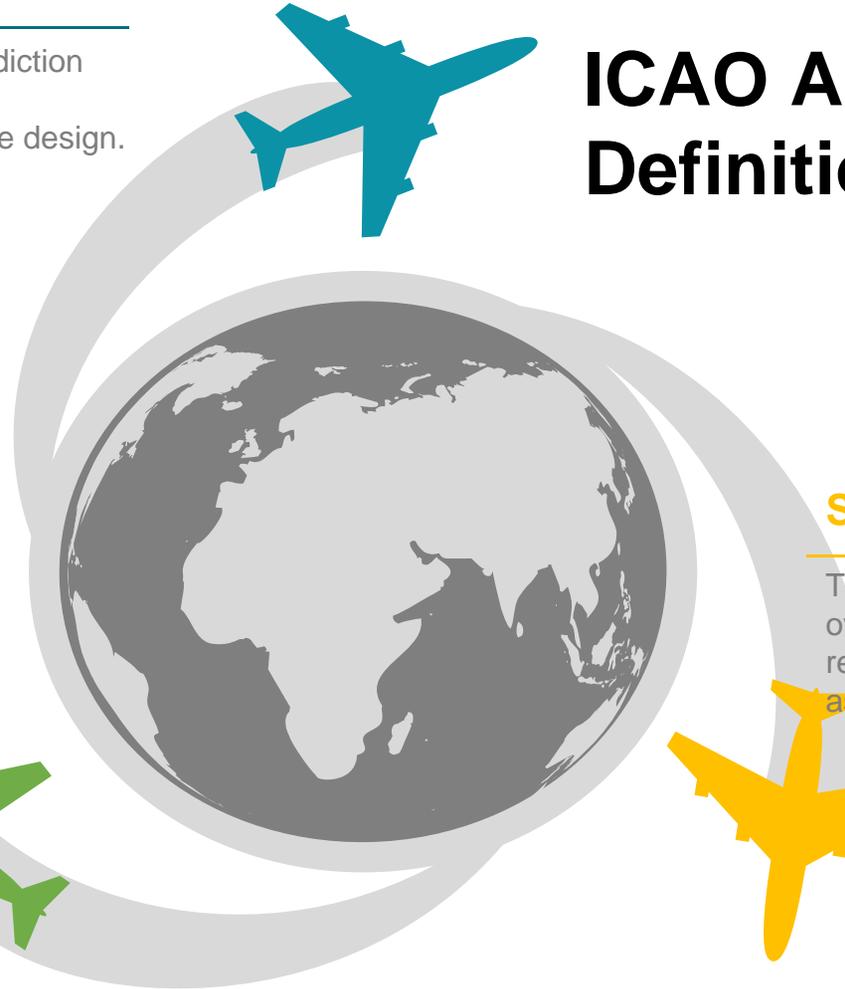
## State of Manufacture

The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

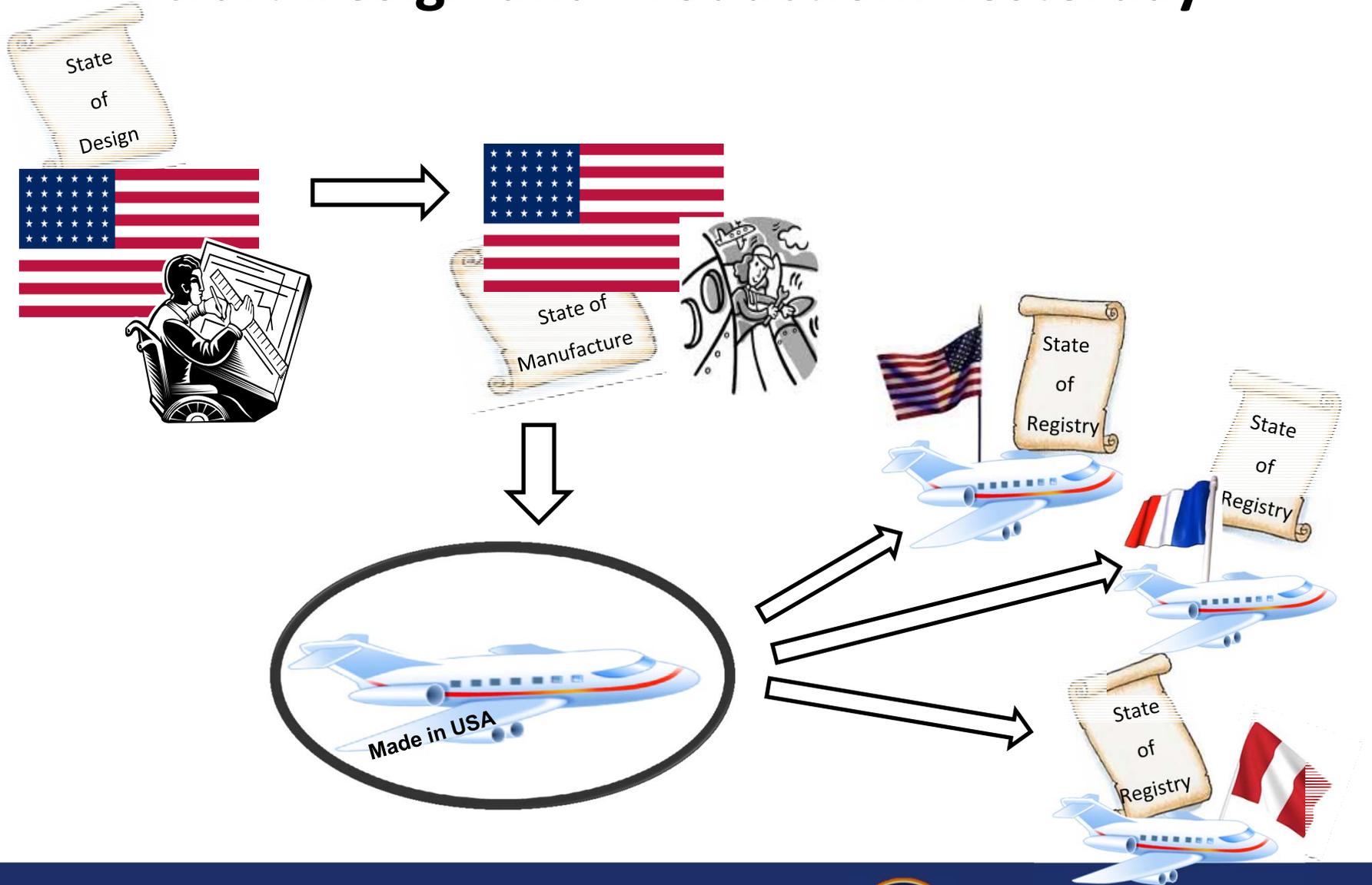


## State of Registry

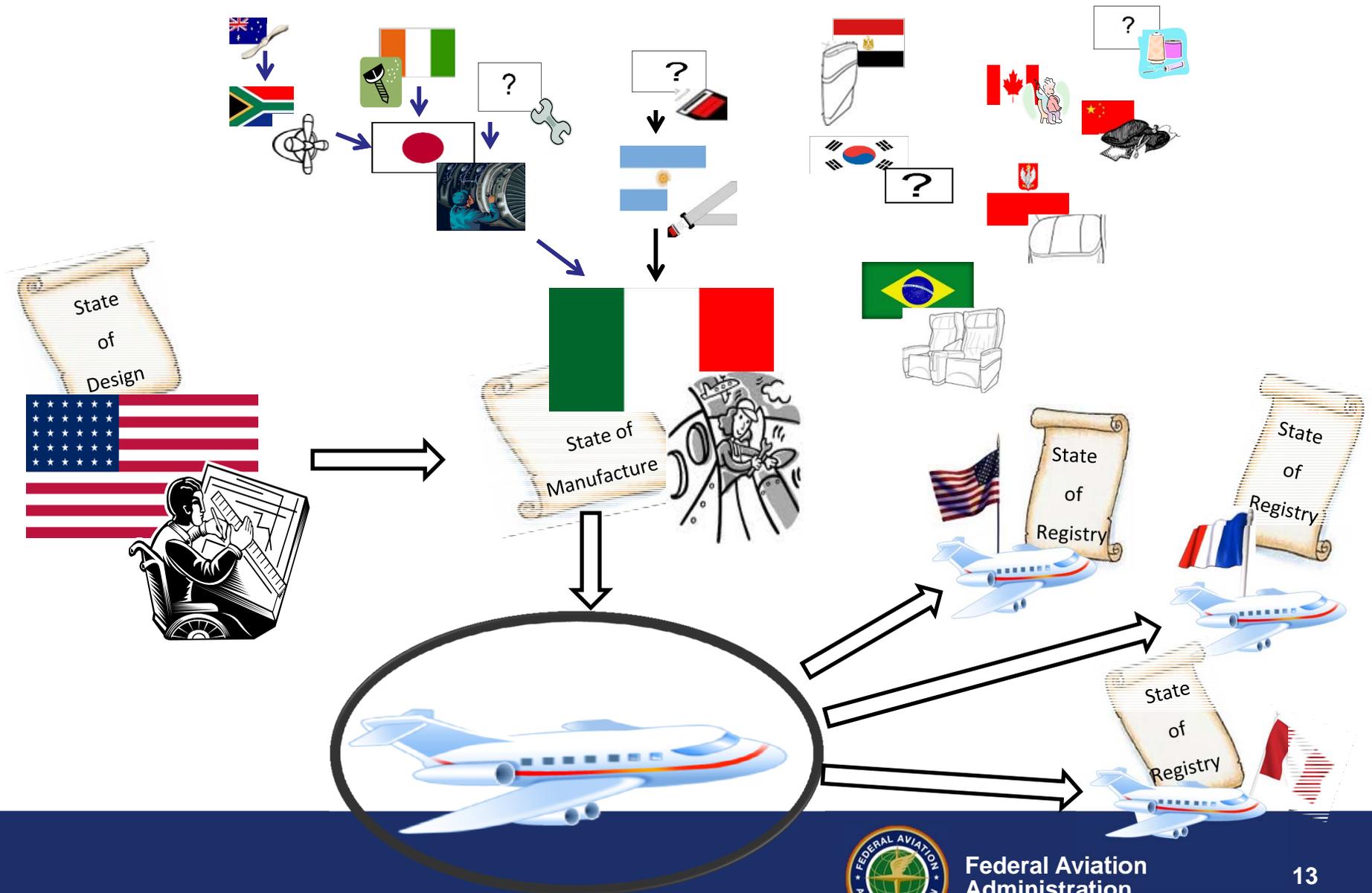
The State on whose register the aircraft is entered.



# Aircraft Design and Production: Yesterday



# Aircraft Design and Production: Today



# Drivers of Change

Numerous external forces factor into AIR's International strategy.

## Globalization of Aviation

*Industry is made up of an international web of networks and complex business arrangements that are challenging our traditional regulatory model.*

- **Separate SoD and SoM for aviation products**
- **FAA PAHs seeking PC extensions abroad**
- **FAA PAHs with multi-tier international suppliers**
- **Industry establishing complex business models**

## Industry Growth

*Industry expands and contracts much faster than the FAA can ever keep pace.*

- **Evolving business models – Revenue sharing (risk sharing)**
- **States experiencing increase in aviation manufacturing expertise**
- **International maintenance, repair and operations (MRO)**

## Velocity of Change

*Technological advances and business model changes are precipitating higher rates of change and increasing the need for organizational agility and adaptability as our environment changes.*

- **International conglomerates and joint ventures**
- **Cross-border corporate acquisitions**
- **Growing number of SoD/SoMs**

## Heightened Expectations

*The public, industry, and government entities continue to increase their expectations of us to do things faster and without error.*

- **U.S. GAO audit outcome of FAA validation process**
- **Industry burden having to be responsible to multiple CAAs**



# Foreign Production in the U.S.

**NON-U.S.  
State Of  
Manufacture  
(SOM)**

Foreign Issued POA/PC Extended into the U.S.	Foreign Holder of U.S. Issued PC
Recaro Aircraft Seating America, Inc.	PC Bell Helicopter
Turbomeca, SA	PC Mitsubishi Heavy Industries
Dassault Aviation, Dassault Falcon Jet Corp.	Recaro Aircraft Seating ETSO
Airbus	PC applicant Agusta Italy
	PC Airbus Helicopters
	PC Embraer Executive Aircraft

**U.S. State Of  
Manufacture  
(SOM)**

POA: Production Organization Authorization  
PC: Production Certificate



# Aircraft Certification Service

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Federal Aviation  
Administration

# *Questions?*



# BACK-UP SLIDES



# AIR Organization



- ★ Directorate Offices
- Aircraft Certification Office
- ▲ Manufacturing Inspection District Office
- ✚ Manufacturing Inspection Satellite Office
- Manufacturing Inspection Office
- International Policy Office



# ***BASA OVERVIEW***

## **Background**

- Since 1927, the United States has concluded bilateral agreements with other countries to provide for airworthiness.
- Bilateral relationships are longstanding.
  - 10 were originally developed in the 1930's - 1950's (*Australia, Belgium, Canada, France, Germany, Italy, Netherlands, Spain, Sweden, United Kingdom*)



# ***BASA OVERVIEW***

## **WHY DOES THE FAA HAVE BASAs?**

- To facilitate and allow the authority of one country to work through their counterpart authority to support the development of teamwork and cooperation.
- To promote public confidence in the safety of the international air transportation system.



# ***BASA EXECUTIVE AGREEMENT***

- **The Executive Agreement**
  - Will be similar for all countries
  - It contains no technical guidance for working together
  - Has no practical effect on FAA's activities without an IP.
- **Purpose**
  - To outline the general scope of regulatory activities that may be undertaken by each CAA for the reciprocal acceptance of findings or approvals.
- **Signed by the U.S. Department of State and the Ministry of Foreign Affairs**
  - The State Department has responsibility for this document. The lead within FAA is API.



# ***BASA-IMPLEMENTATION PROCEDURES (IP)***

- **The purpose of implementation procedures:**
  - document detailed procedures
  - define technical level working arrangements
  - define the exchange of services/rights that will be provided by each authority.
  - state obligations clearly to both parties.
- **FAA has responsibility for these documents.**
  - The lead is AVS.

