

# Aircraft Certification Service

## Challenges to Global Manufacturing Oversight

Presented to:

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Federal Aviation  
Administration



# Overview

- **Challenges**
- **Case for Change**
- **Oversight Initiatives**
- **Risk Assessment**
- **Reciprocal Technical Assistance**



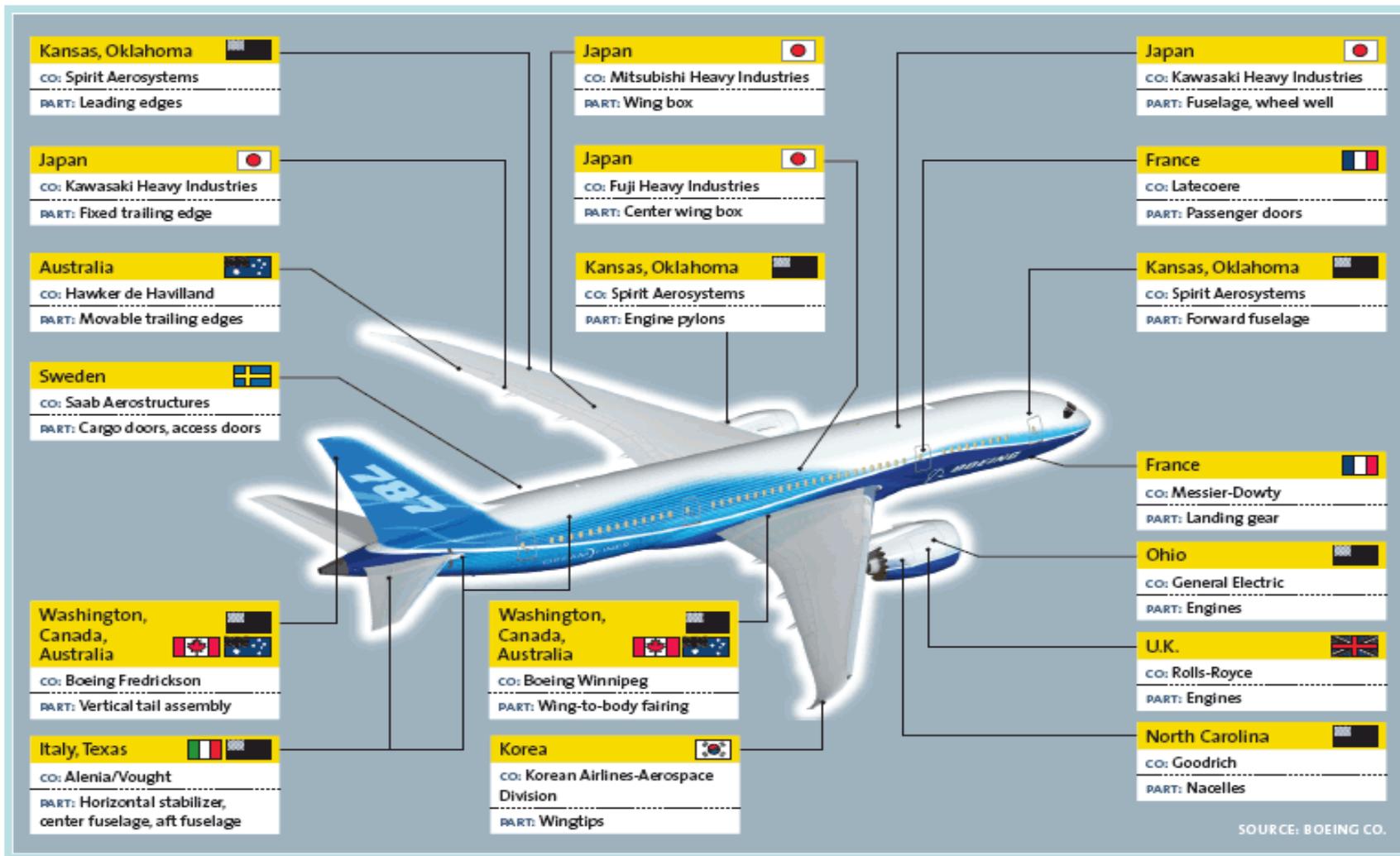
# Challenges

- **Manufacturing has evolved**

- Aviation products produced all over the world
- Emerging technologies
- Greater reliance on supply chain
- Complex industry risk sharing partnerships



# What does a U.S. State of Design Aircraft Look Like?



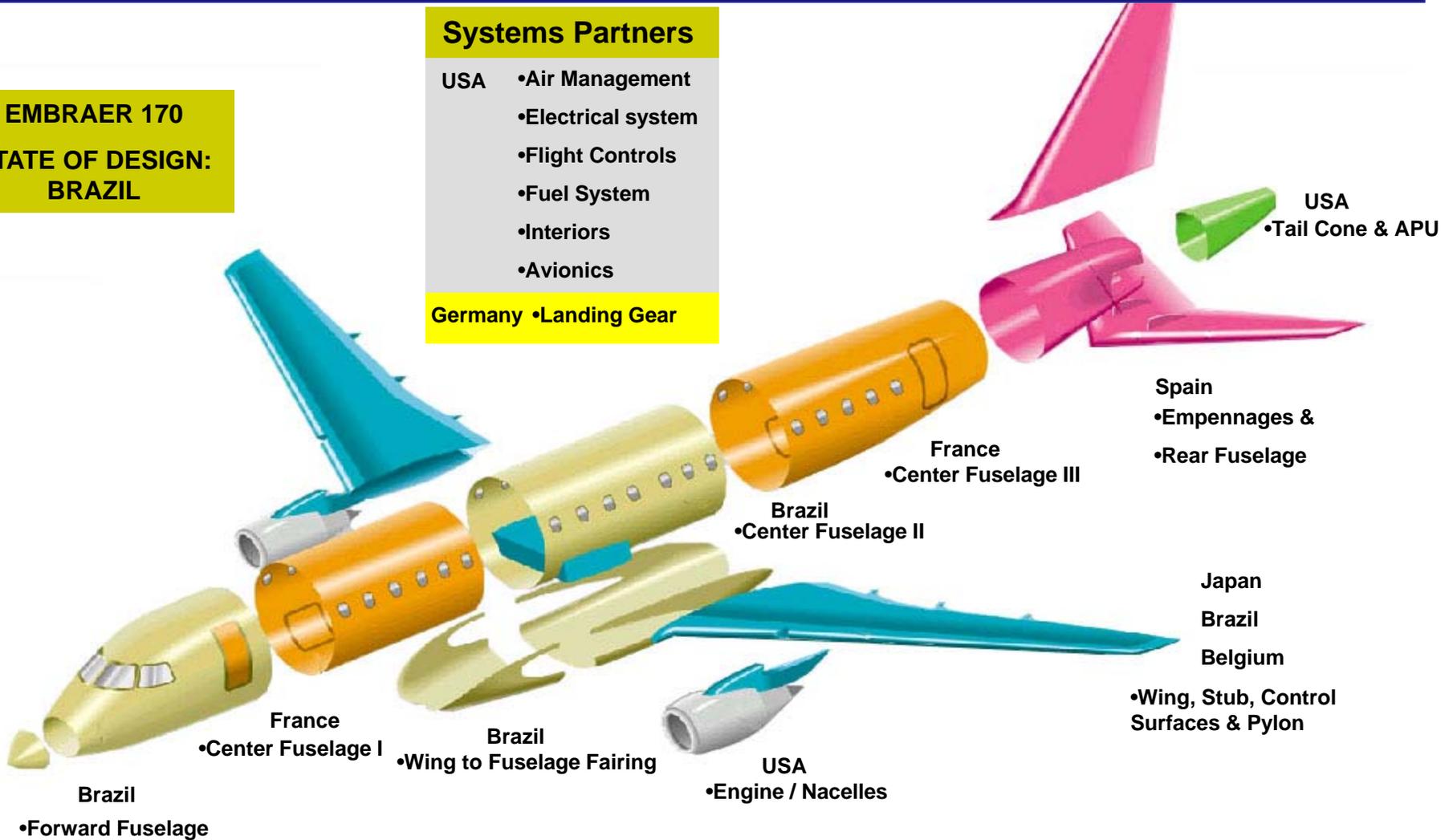
# Embraer 170 Suppliers

**EMBRAER 170**  
**STATE OF DESIGN:**  
**BRAZIL**

## Systems Partners

- |     |  |
|-----|--|
| USA | <ul style="list-style-type: none"> <li>•Air Management</li> <li>•Electrical system</li> <li>•Flight Controls</li> <li>•Fuel System</li> <li>•Interiors</li> <li>•Avionics</li> </ul> |
|-----|--|

Germany •Landing Gear



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# A350 XWB

Welcome on board to our A350 XWB Extended Enterprise Partners!

26

New system policy: less but bigger WP  
Number of suppliers reduced by 40%



(1) SPIRIT UK & SPIRIT US  
(2) EADS EFW (Cabin + Aerostructure)

All A350XWB major partners committed to Extended Enterprise collaborative model



# Case for Change

- **Industry continues to expand globally**
  - Increased production extensions
  - Production approval holders are becoming integrators
  - Major assemblies produced all over the world
- **Limited Resources**
  - Budgets aren't likely to increase



# Case for Change

**Complex industry business arrangements challenges the traditional regulatory model.**



**States of Manufacture must oversee manufacturing facilities across the globe.**

**Bilateral agreements can support accomplishment of global oversight in a more efficient manner.**



# Oversight Initiatives

AIR Production Oversight

Risk Assessment

Reciprocal Technical Assistance

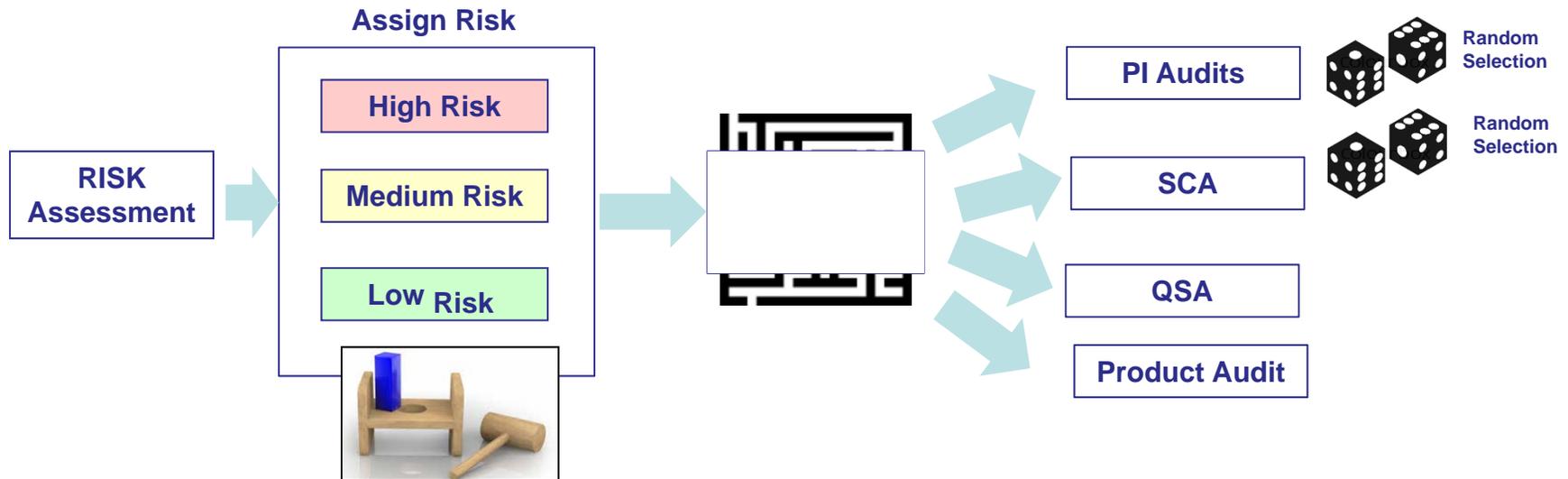
Performance Based Oversight (PBO)

International Certificate Management



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# Current Risk Assessment Process



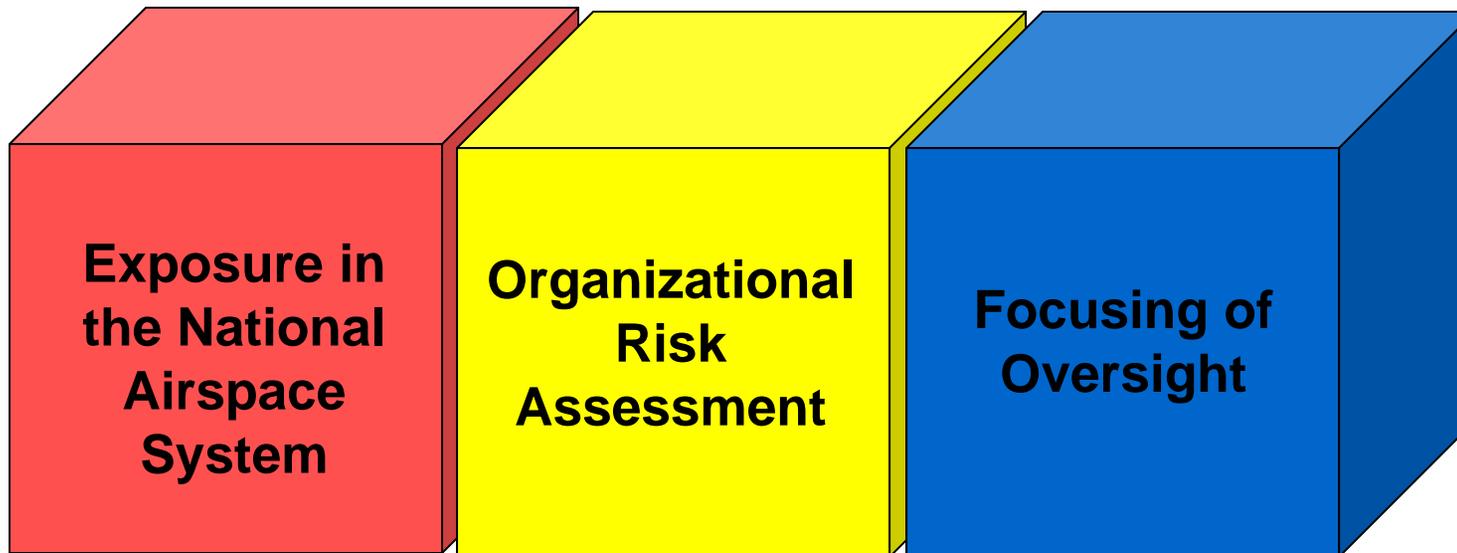
Assigning risk using the current model assumes “a one size fits all” approach and does not address exposure in the NAS

Issue: Random sampling method assumes the risk over associate facilities, extensions, or suppliers is equal which is **NOT** really the case.

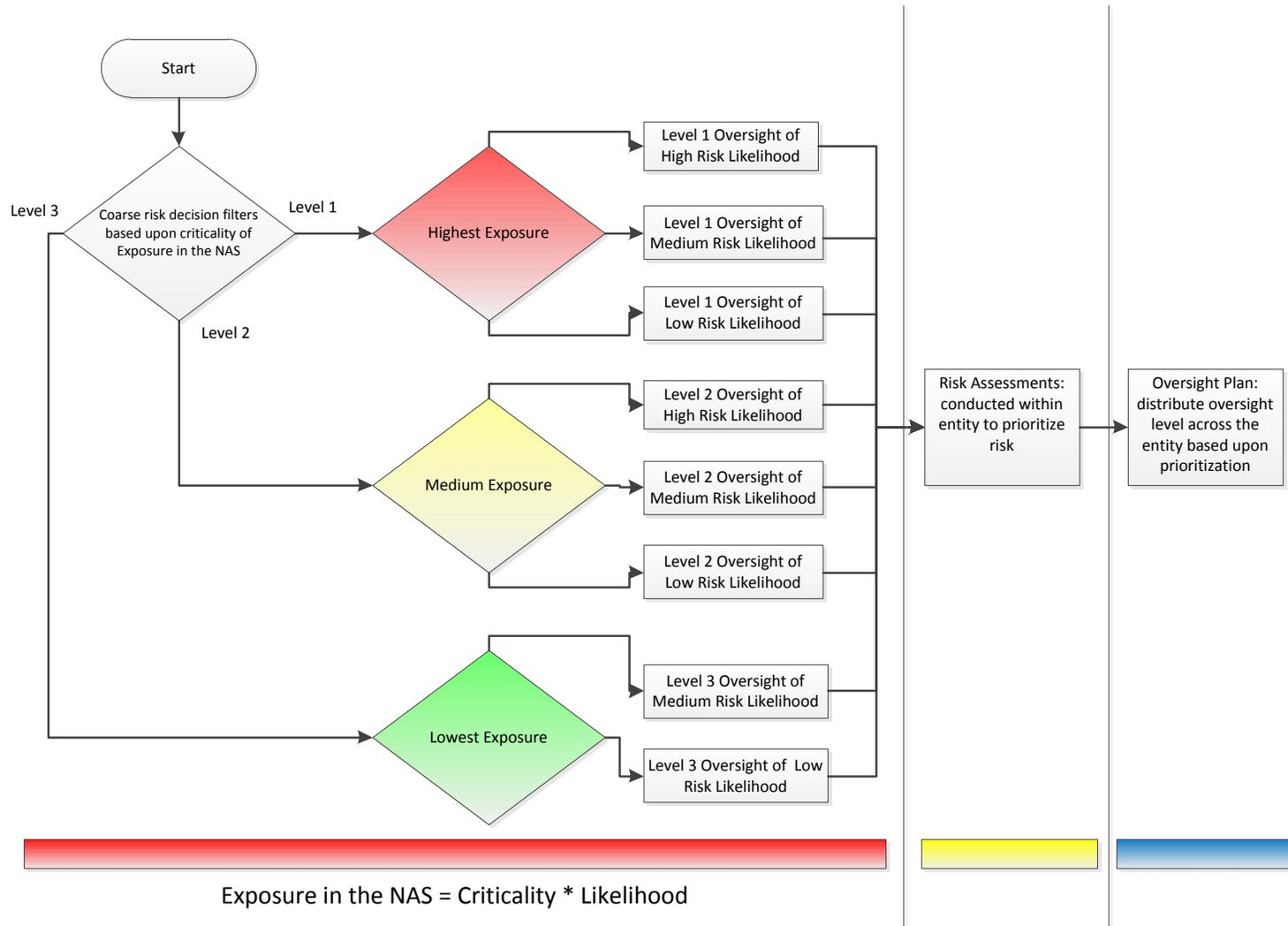


# Risk Assessment Process

## Three Step Model



# Three Step Oversight Model



# Leveraging Bilateral Partners

- **Objectives**

- Decrease FAA audits of facilities in other countries through increased reliance on CAAs
- Applies resources made available to FAA through our bilateral agreements

- **Details**

- Developing process for working with CAAs:
  - Familiarization with each others oversight system
  - Developing and implementing the working agreement
  - Continue to build our bilateral relationship
- Technical assistance is reciprocal



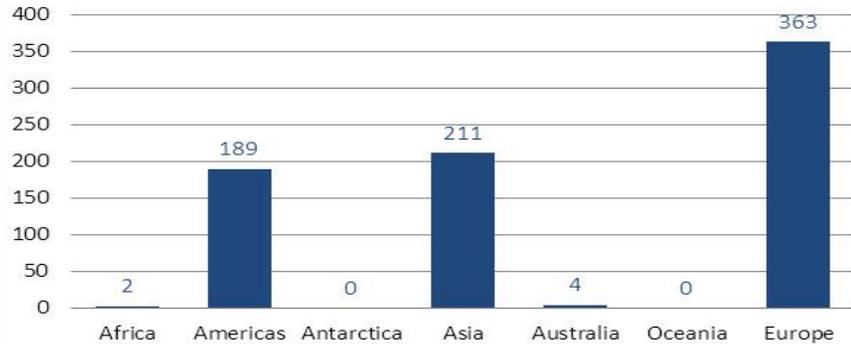
# Limitations

- **The CAA may not have the legal authority to perform technical assistance if the facility does not hold their respective countries production approval.**
- **For those instances the FAA may still need to conduct some international supplier control audits.**

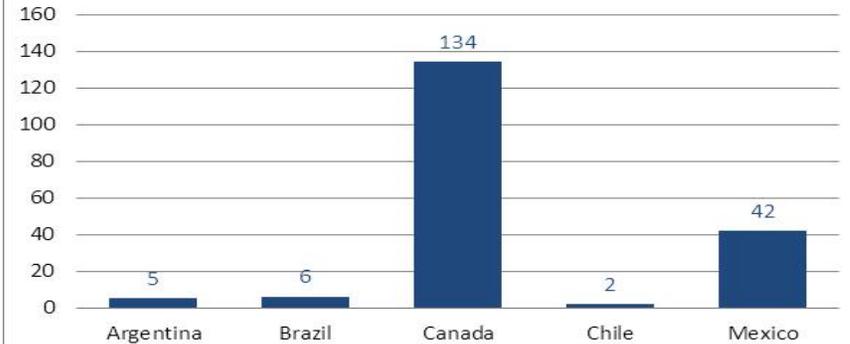


# Critical International Suppliers

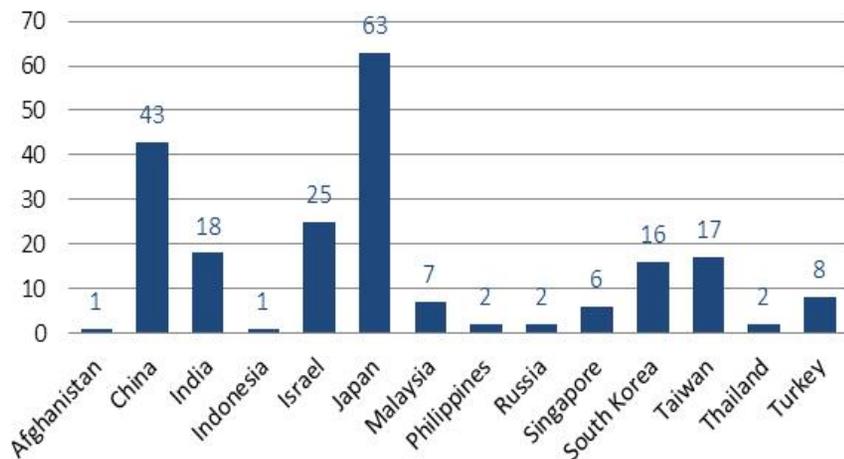
### Suppliers by Continent



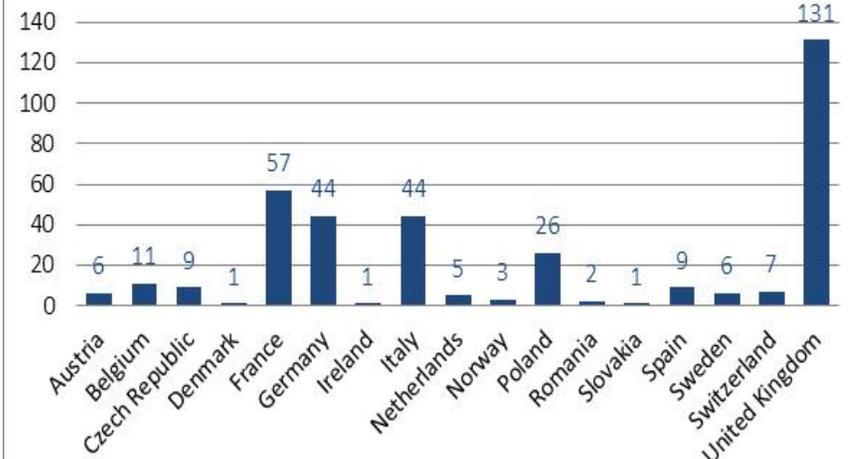
### Suppliers in Americas



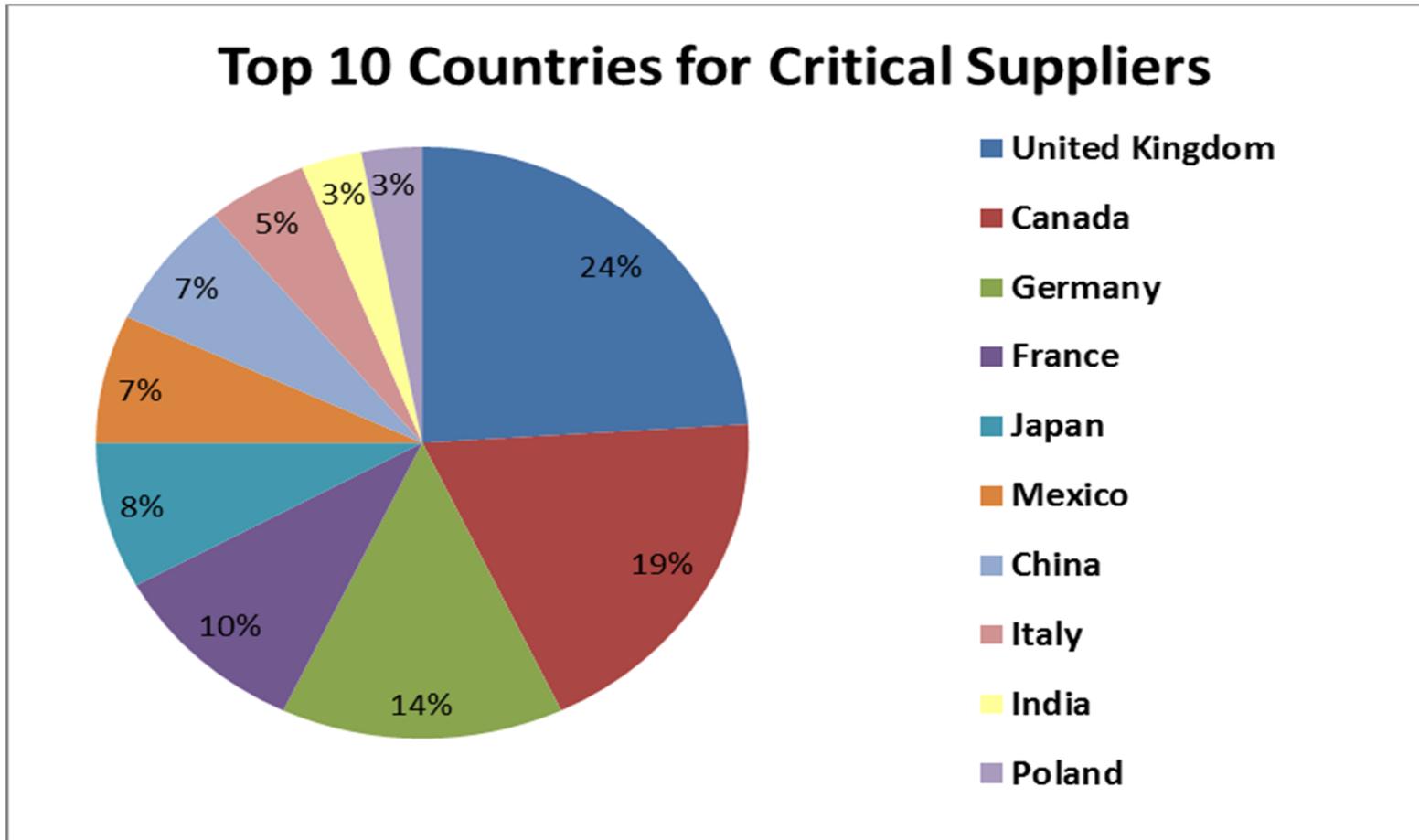
### Suppliers in Asia



### Suppliers in Europe



# Reciprocal Technical Assistance



# Reciprocal Technical Assistance

PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
Planning & Preparation	Outreach	Familiarization	Working Agreement	CAA Surveillance Activities	Performance Monitoring



# Reciprocal Technical Assistance

- **Potential Benefits**

- Partnership approach to oversight to address today's environment;
- Reduced duplication of oversight activities;
- Effective use of our limited resources in areas of high risk;
- Safety data is shared and used with our partnership;
- Enhanced bilateral relationships;
- Greater familiarization of each other's oversight system supports standardization and harmonization of oversight systems.



# Opportunities for Bilateral Partners

- **Bilateral partners can support each other in achieving their global oversight goals:**
  - Global suppliers may be production approval holders under a bilateral partner's system.
  - Bilateral partners may be able to share information and coordinate activities related to the oversight of manufacturers supporting the global aviation system.
  - Bilateral partners may be able to perform oversight tasks to support a partner's oversight responsibilities.



# Questions?

