



# Washington State Air Cargo Movement Study

*Joint Transportation Committee  
Olympia, WA  
November 15, 2017*



# Agenda

- Introductions/Roles on Study
- Project Purpose and Objectives
- Review Work Plan and Schedule
- Air Cargo Background
- Next Steps
- Discussion

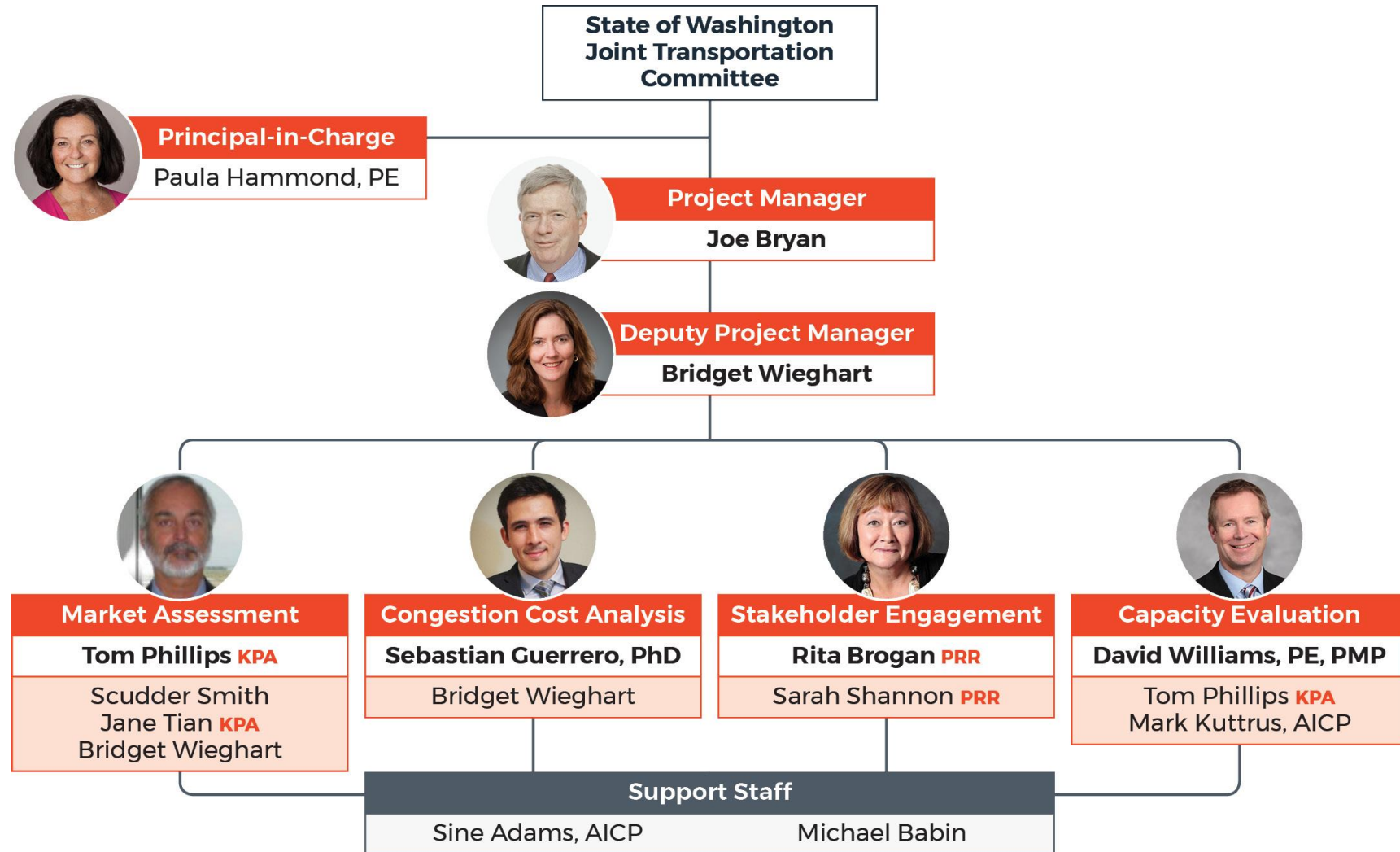
# Project Purpose and Objectives

Purpose: Evaluate the current and future capacity of the statewide air cargo system

Objectives:

1. Educate policy makers about air cargo movement at Washington airports;
2. Explore possibilities for accommodating the growing air cargo market at more airports around the state; and,
3. Identify the State's interest and role in addressing issues arising from air cargo.

# Organizational Chart



All staff are WSP unless noted. **KPA** Keiser Phillips Associates **PRR** PRR, Inc.

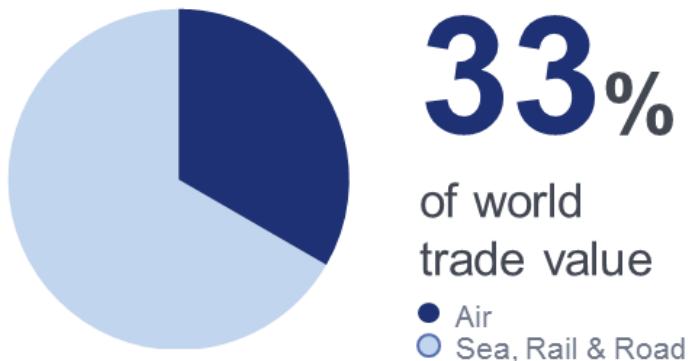
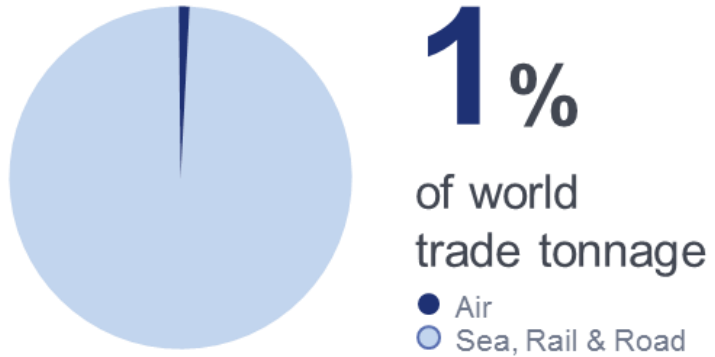
# Air Cargo Basics



## Air Cargo is Big Business

- Over \$100 billion air freight & express market
- \$60 billion US domestic market
- Freight traffic growing 3-5% per year worldwide
- Market size has doubled every ten years
- Integrator/express carriers control 65% of the US domestic cargo market
- Cargo share of total airline revenues:
  - 5% for US domestic majors
  - 15% for European majors
  - 20-50% for Asian majors

Air cargo forms a small portion of global tonnage...  
...but a large part of global trade value



**Air cargo is extremely valuable to world trade**

# Work Plan and Schedule



# TASK 1: DESCRIBE THE AIR CARGO SYSTEM IN WASHINGTON STATE

Profile the air cargo market and air facilities that make up the air cargo system in Washington

Outcomes:

1. Overview of existing facilities and services
2. Interviews with existing Washington air cargo users
3. Review of global, national, regional and local air cargo flows and types of commodities being moved by air in Washington

## TASK 2: AIR CARGO CONGESTION

- Air cargo congestion threatens the competitiveness of important economic sectors
- Washington's airports compete with other airports and modes
- Define and estimate the costs of air cargo congestion

# TASK 3: EVALUATE HOW TO USE EXISTING CAPACITY ACROSS WASHINGTON STATE

## Site Visits

## Review Opportunities and Constraints

### Develop criteria to:

- Compare competitive airports to Washington airports
- Evaluate the potential for Washington airports to attract:
  - *Non-integrated all-cargo carriers*
  - *Integrated all-cargo carriers*
  - *International air freighter operators (scheduled and charters)*
  - *Third-party logistics companies*

Evaluate the potential to market State airports to different carrier types based on strengths, weaknesses, opportunities and threats

## TASK 4: RECOMMENDATIONS AND IMPLEMENTATION STRATEGIES

Create a vision and strategy for air cargo and logistics services development in Washington

- Provide a list of actions necessary to implement the vision
- Identify priorities and responsibility for each action
- Include performance measures and proposed budget

The Washington State Air Cargo and Logistics Business Development Strategic Plan will include:

- Ways to provide capacity relief for Sea-Tac
- Role of other Washington airports in capacity relief
- Guidance to regional airports for expanding their markets

# TASK 5: STAKEHOLDER PANEL AND STAFF WORKGROUP

## Staff Workgroup

- Mostly legislative and agency staff members
- Guidance and input to technical methods and results
- Insight into the interests of their agencies/committees
- Collaborate on recommendations to the stakeholder panel

## Stakeholder Panel

- Legislators, top agency officials and industry representatives
- Review the results and recommendations at a high level
- Focus on implications for their constituents
- Input on recommendations to JTC, the legislature and the governor, who will make final decisions

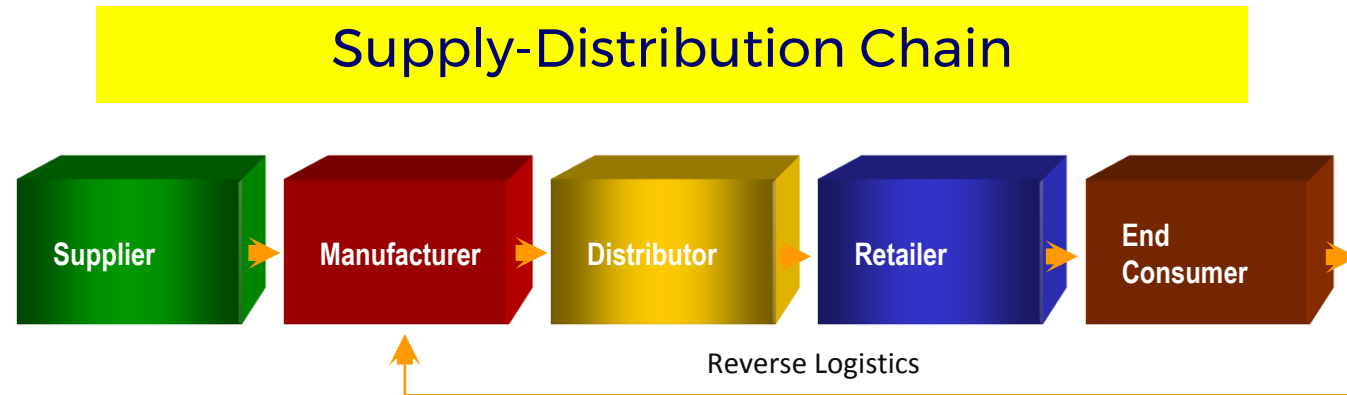
# Schedule

Task	2017				2018												
	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
<b>Task 1: Describe the Air Cargo System in Washington State</b>																	
1.1 Air Cargo Industry Background and Trends	█	█															
1.2 Regional Market Analysis			█	█	█												
1.3 Define Catchment Area and Flow Model				█	█												
1.4 Air Cargo Forecasts				█	█												
1.5 Facility Requirements for Air Cargo				█	█	█											
<b>Task 2: Air Cargo Congestion</b>																	
2.1 Define Air Cargo Congestion		█	█	█													
2.2 Estimate Cost of Congestion					█	█											
2.3 Identification of Air Cargo Interests						█	█										
<b>Task 3: Evaluate How to Use Existing Capacity</b>																	
3.1 Site Visits				█	█	█	█										
3.2 Review Opportunities/Constraints							█	█	█	█							
<b>Task 4: Recommendations and Implementation Strategies</b>										█	█	█					
<b>Task 5: Stakeholder Panel and Staff Workgroup Meetings</b>																	
Project Kick-off Meeting	█																
Staff Workgroup Meetings			█				█			█			█				
Stakeholder Panel Meetings				█				█			█			█			
<b>Task 6: Presentations</b>			█		█					█						█	█
<b>Task 7: Draft and Final Reports</b>																	
<b>Task 8: Project Coordination</b>																	



# Air Cargo Background

# Cargo Industry Players

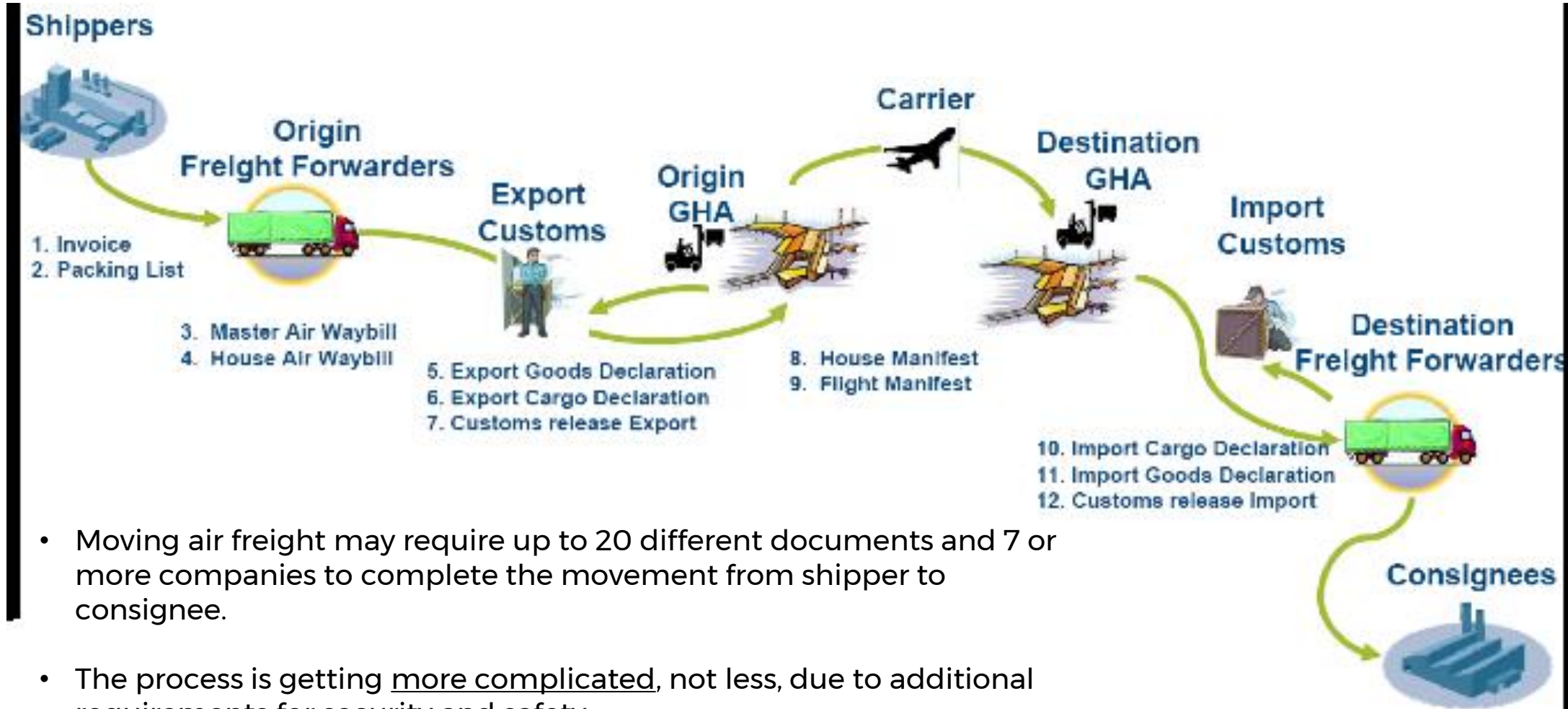


## Air Transportation/Logistics

- Shippers
- Forwarders (3PLs/4PLs)
- Customs brokers
- Consolidators
- Indirect carriers
- General Sales Agents
- Gov. postal authorities
- Motor carriers
- Air carriers
- Airports
- Cargo/Ground handlers
- Federal Inspection Agencies
- Consignees



# Air Cargo Supply Chain is Complex



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- Moving air freight may require up to 20 different documents and 7 or more companies to complete the movement from shipper to consignee.
- The process is getting more complicated, not less, due to additional requirements for security and safety.

# Air Cargo Carriers

## ● Combination Carriers (airport to airport)

- ▶ Belly Cargo Carriers:  
Delta, United, American, Southwest, etc.
- ▶ Pax Belly Cargo & Freighter Operators:  
Korean Air, China Airlines, Air China, EVA, etc.



## ● All-Cargo Carriers

- ▶ Integrator / Express (door to door)  
FedEx, UPS, SF
- ▶ Integrated Forwarder (door to door)  
BaxGlobal, DHL, TNT, Amerex, Amazon.com, etc.
- ▶ Traditional Line Haul (airport to airport)  
Kalitta, Cargolux, Polar , Yangtze River Express, etc.



## Road Feeder Service

- Offered by a scheduled cargo operator to move its carried goods to and from the aircraft and/or terminal by road, allowing the carrier to offer service to a city to which it does not fly
- Purpose: To efficiently and effectively expand the global air cargo supply chain

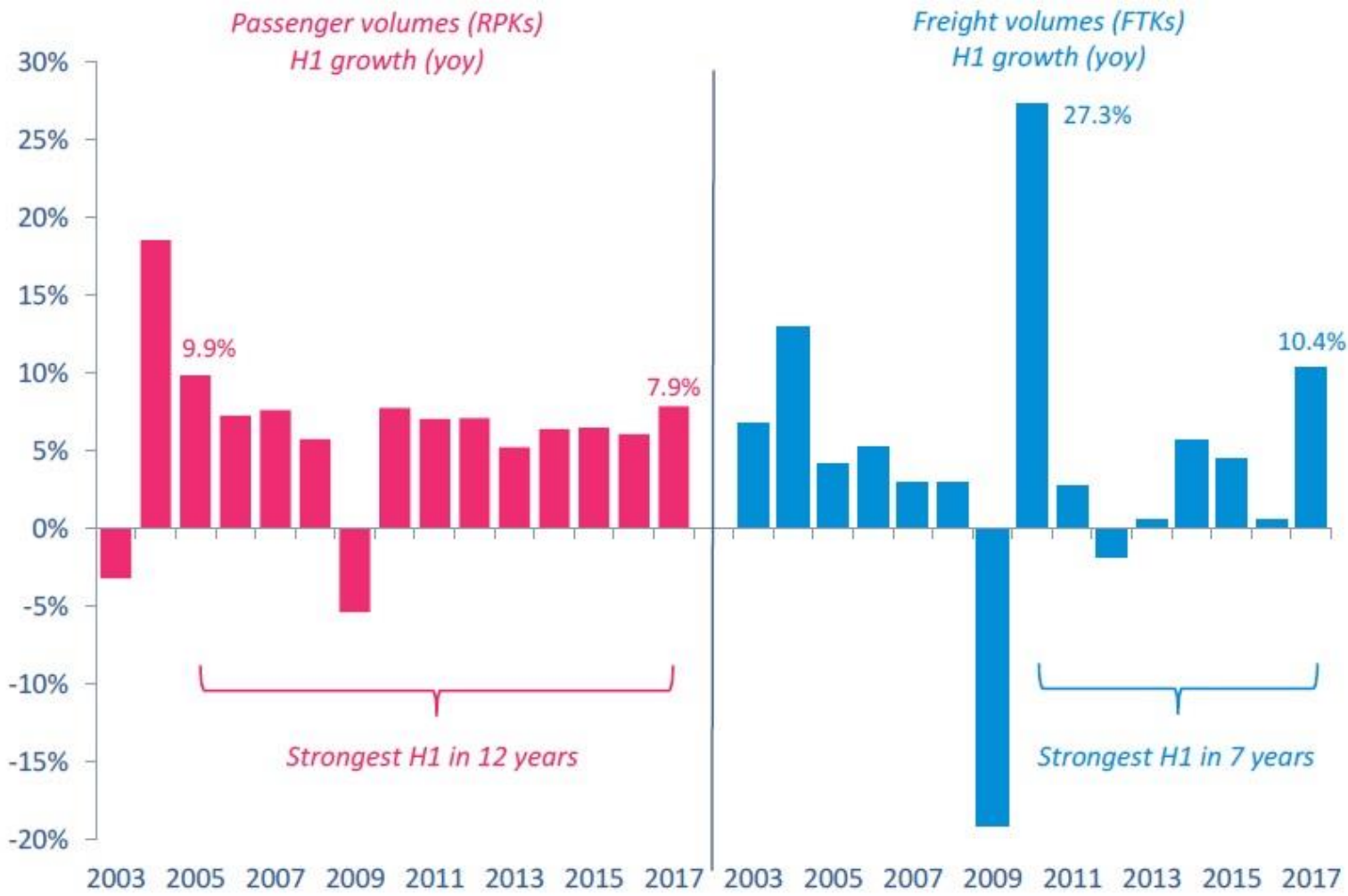


# Cargo Industry Status



# Cargo growth more variable than passenger but recovering from the Great Recession

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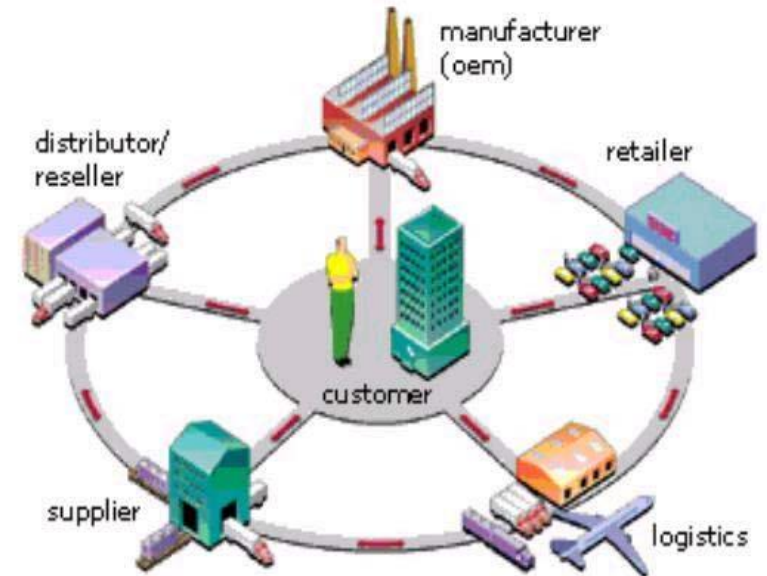
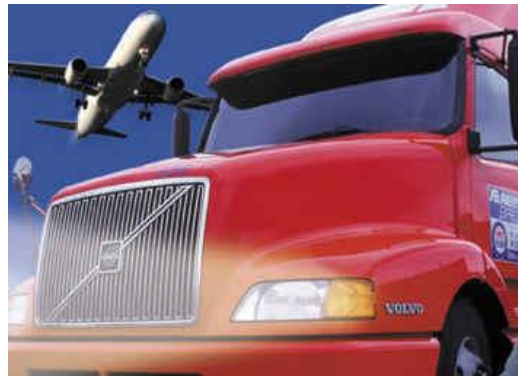


Source: IATA

## Some Trends of Significance

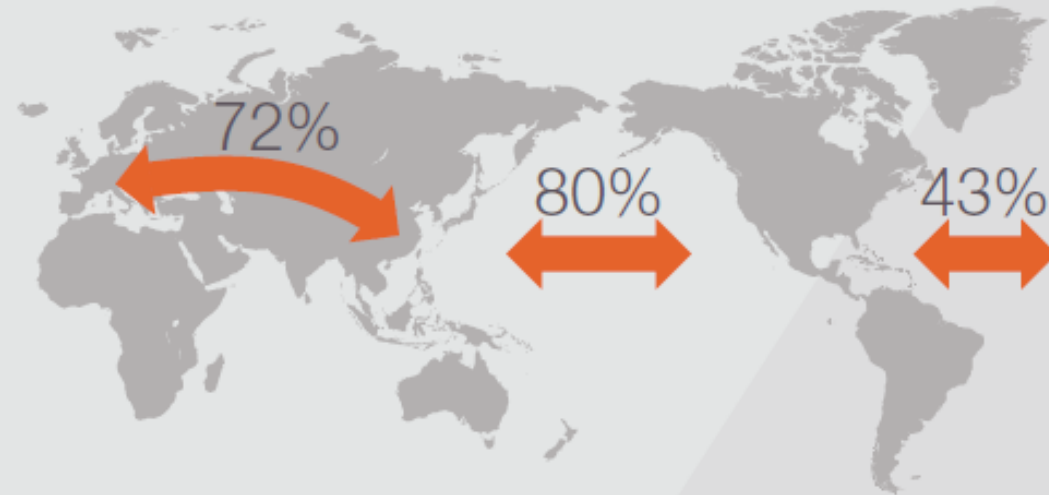
- Continued use of freighters
- Restructuring of airline and forwarder business models
- Increased regulation and security compliance requirements
- Single Window Customs Entry
- B2C e-commerce
- E-freight initiatives

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# Freighters will remain the main players

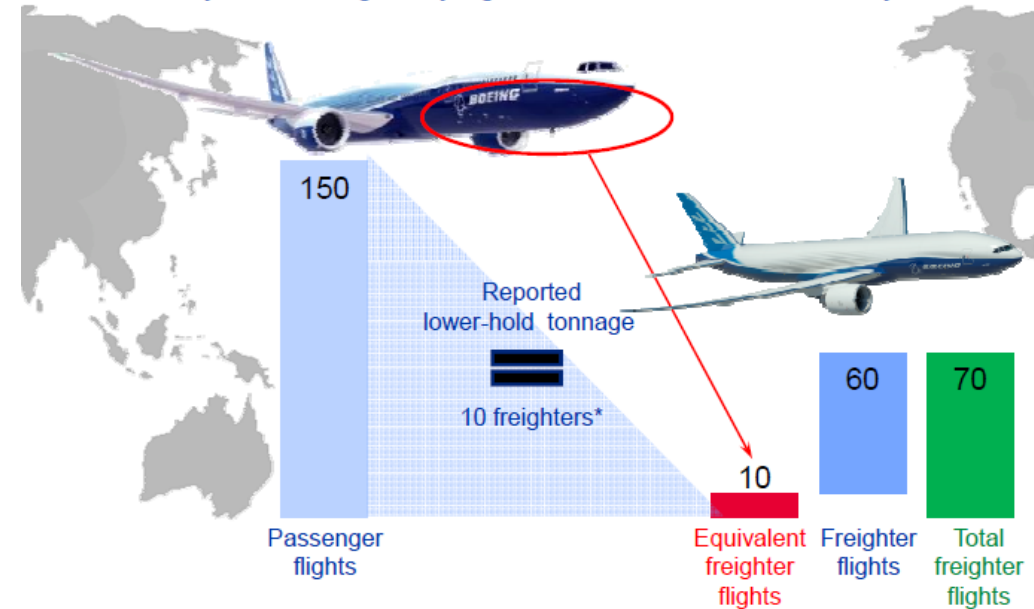
Total air cargo traffic carried by freighters by percentage



60% of air cargo traffic carried on freighters

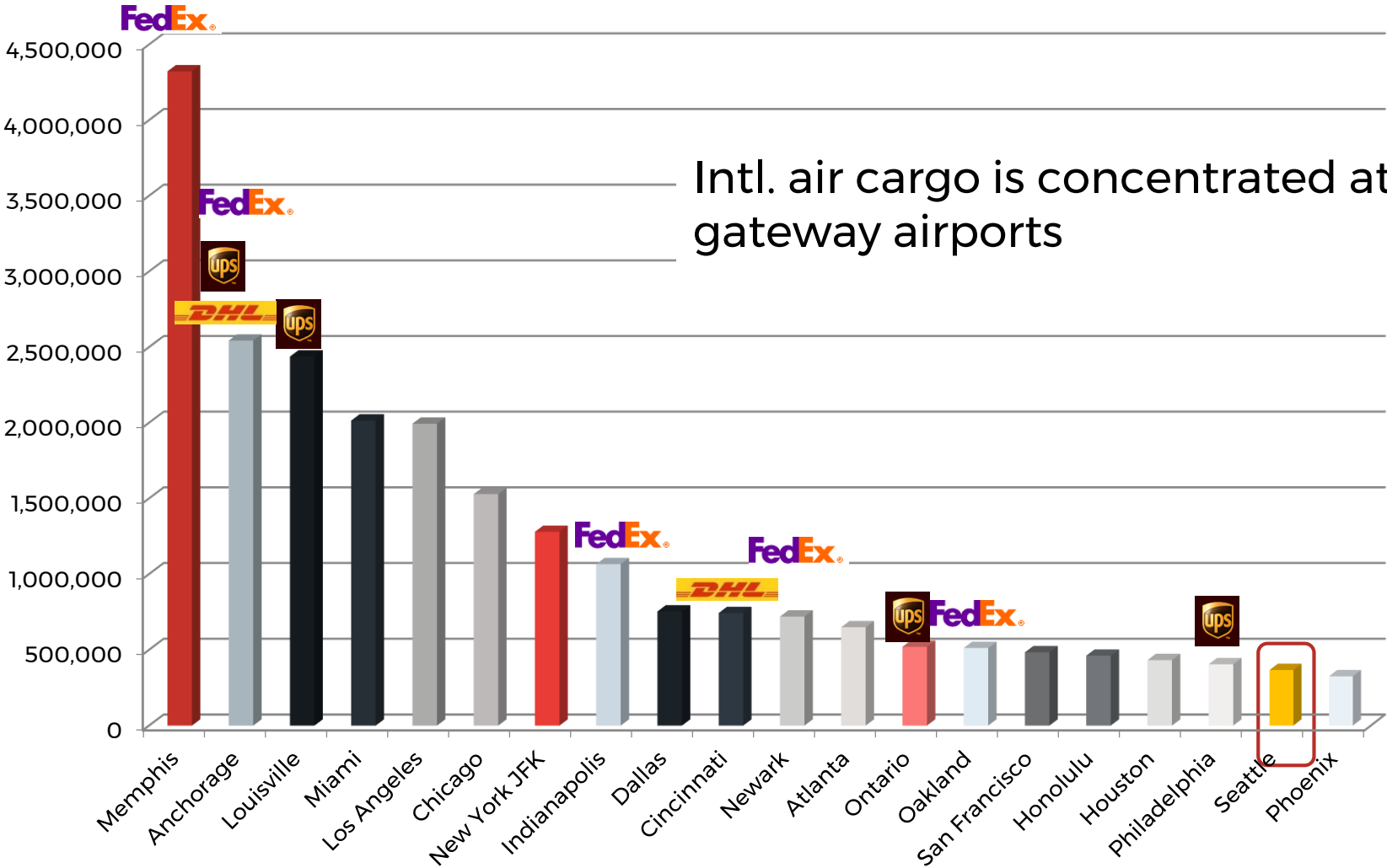
150 transpacific passenger flights carry the equivalent of only 10 freighter flights

Analysis of average daily flights from Asia to North America, year 2013



\*Conversion takes into account destination, range, and load factor.

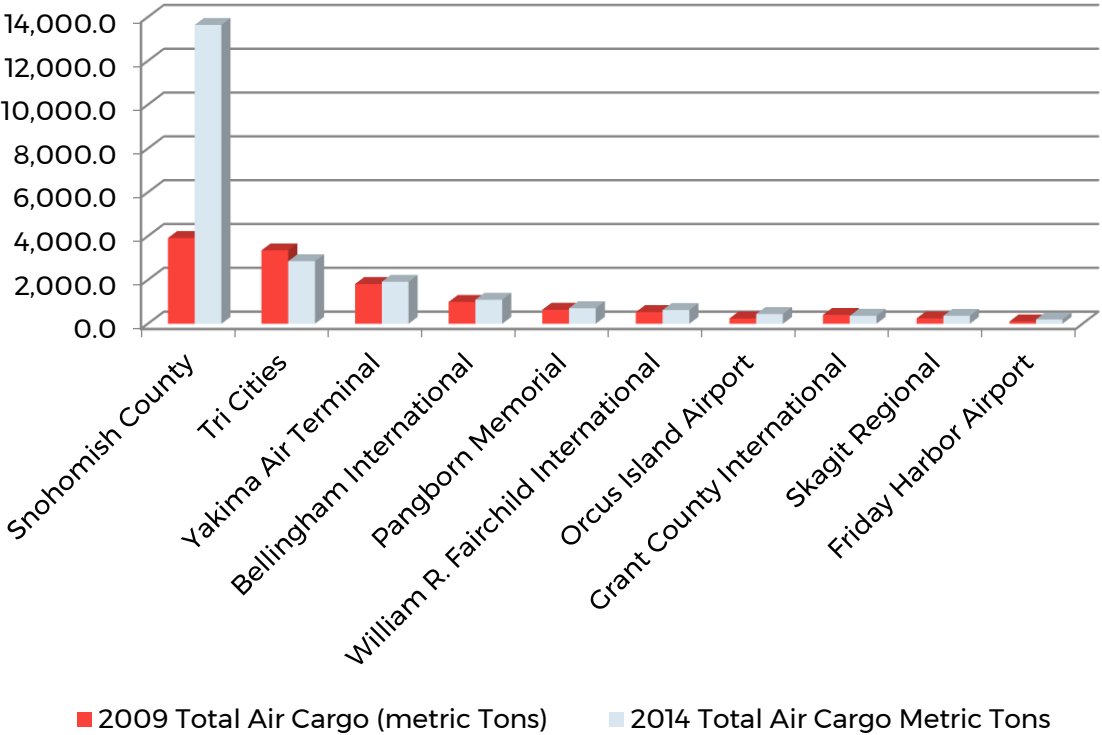
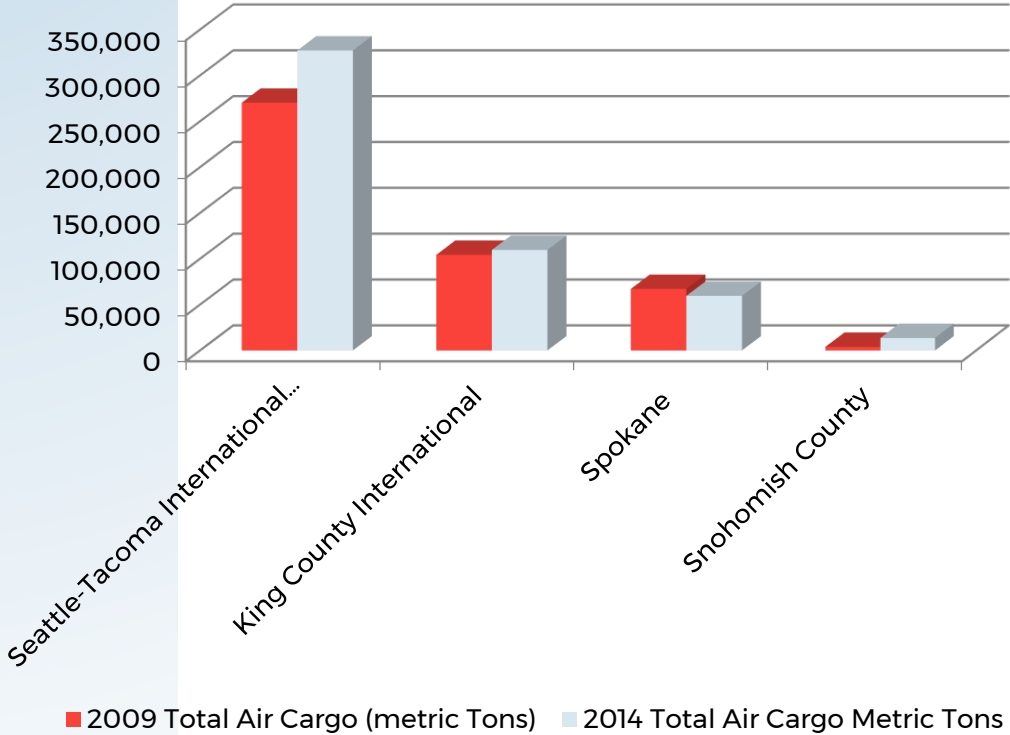
# Top 20 US Air Cargo Airports 2016





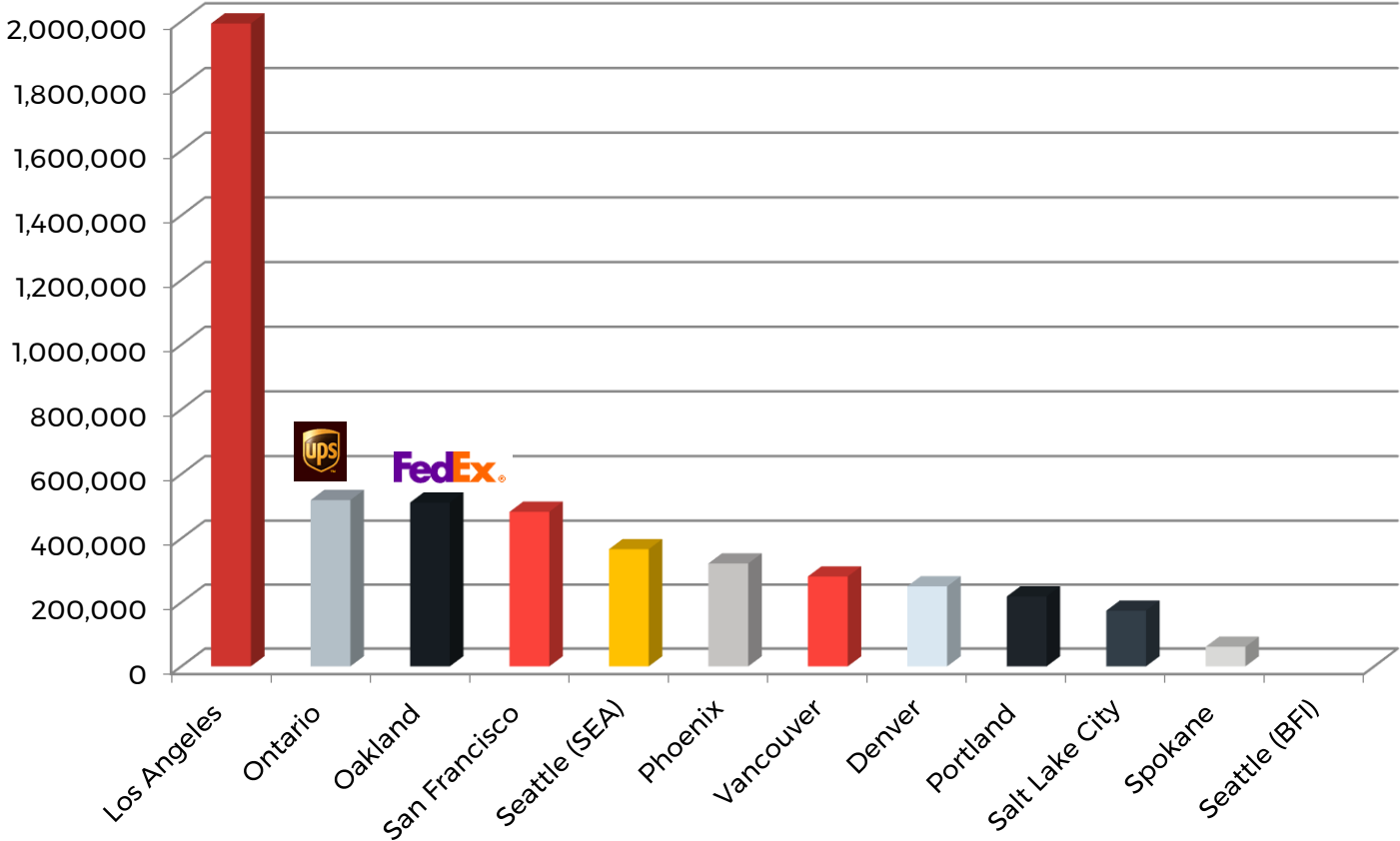
# Top WA State Air Cargo Airports 2014

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Source: ACI and KPA analysis

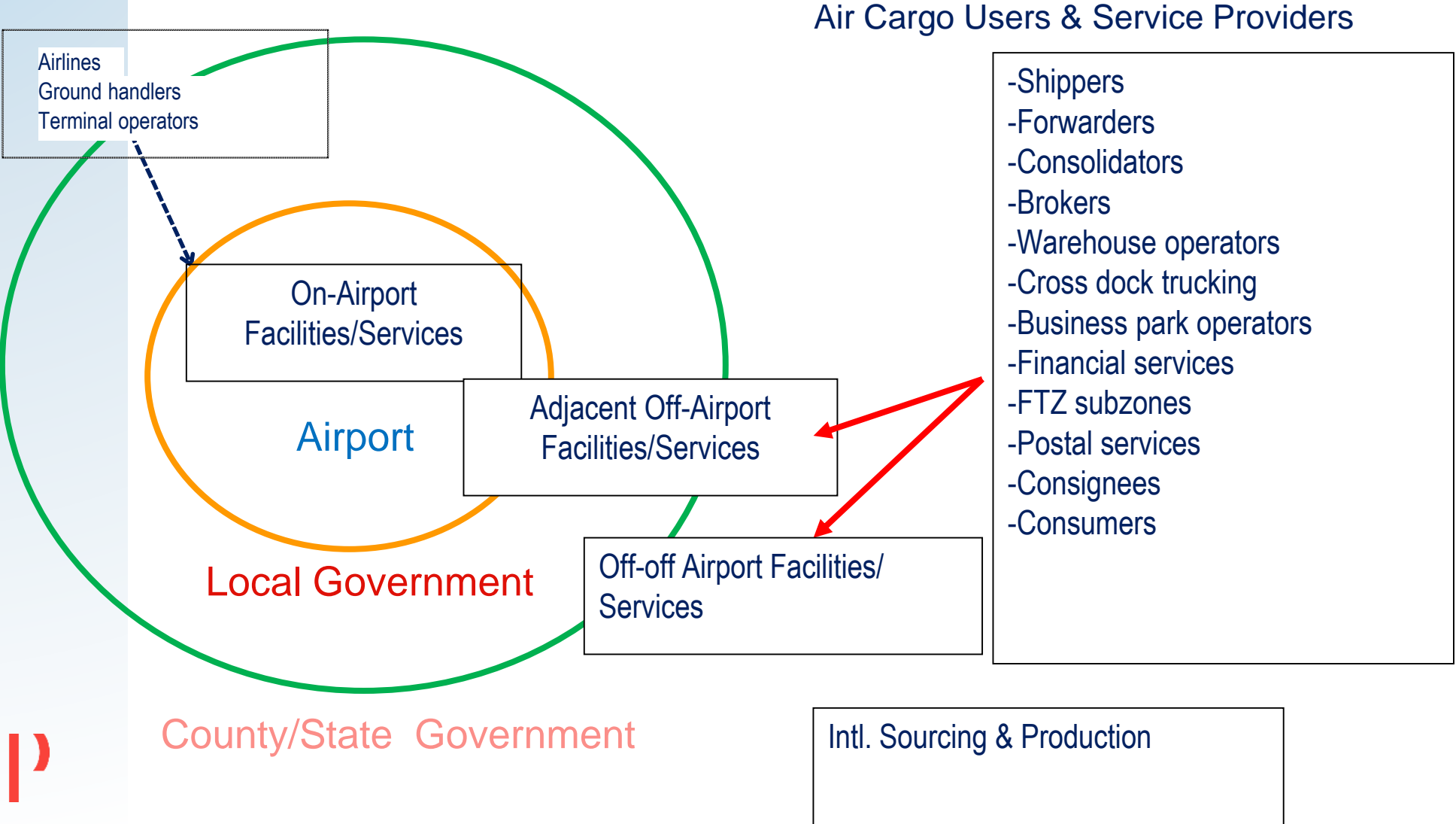
# Top West Coast Air Cargo Airports 2016



\*Note: BFI does not report data to ACI

# The Airport Air Cargo Ecosystem

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## Summary

- Air cargo growth has seen robust growth in 2016 but could be nearing a peak
- There are two major business models for air cargo carriers
  - *integrator/express model*
  - *airport-to-airport model*
- Trucking is of great importance to air cargo
- Airports should think beyond their boundaries in planning
- Airport cargo strategies are reliant on knowing your market and key airport and community objectives
- Partnering is a key to creating new airport business models

## Next Steps

- Update Industry Trends
- Define Air Cargo Congestion
- Conduct Regional Market Analysis
- Review and Update Air Cargo Forecasts Inventory Existing Facilities
- Staff Workgroup meeting - November 30
- Stakeholder Panel meeting - December 8

# DISCUSSION

