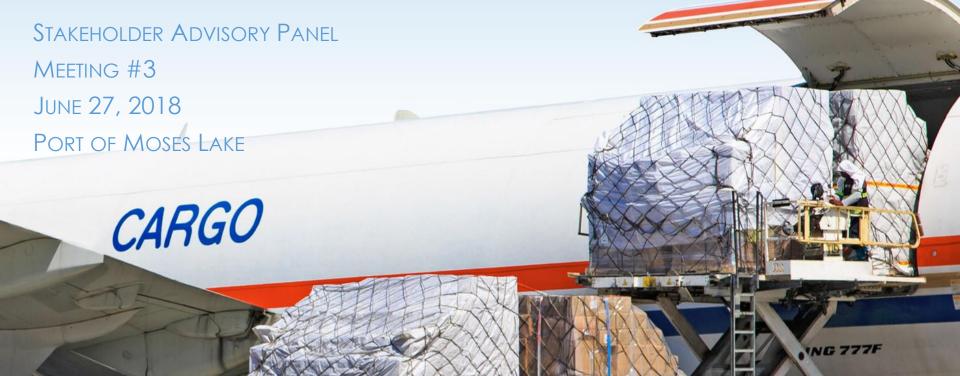
# WASHINGTON STATE AIR CARGO MOVEMENT STUDY







## **Study Status**

- Describe the Air Cargo System in WA State
  - Final
- Air Cargo Congestion
  - Final
- Evaluate how to use Existing Capacity in Washington
  - Draft for Review
- Recommendations and Implementation Strategy
  - July-September
- Draft and Final Report
  - October-December





## **Agenda Topics**

- Comparison of competitive airports to Washington State airports
- Basic components needed to attract & maintain air cargo service
- Competitive analysis of select Washington air cargo facilities
- Summary of strengths, weaknesses, opportunities and threats for select airports
- Discussion of opportunities of interest and potential State role
- Next steps





# Evaluate How to Use Existing Capacity Across Washington State

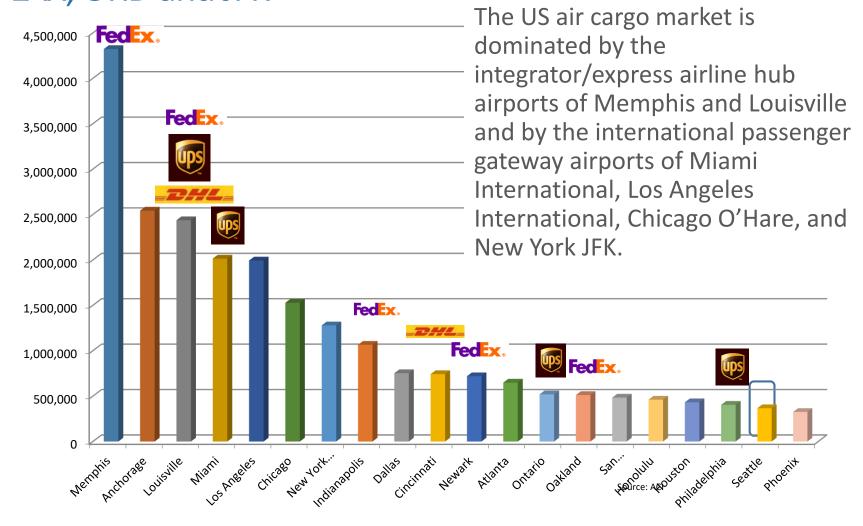
What does it take to make an airport competitive for air cargo?

Which airports in WA have key elements needed to attract air cargo?

What are the strengths, weaknesses, opportunities and threats for WA air cargo airports?



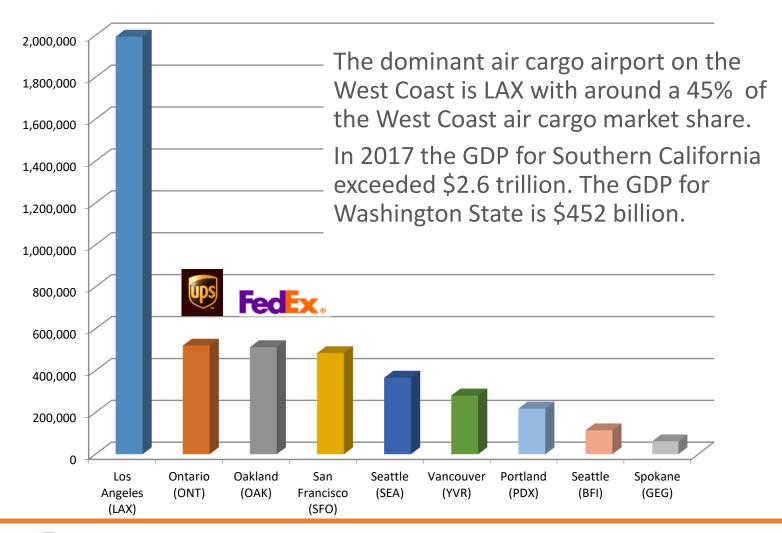
## The Dominant Air Cargo Airports in the US are MIA, LAX, ORD and JFK







### LAX dominates the West Coast Air Cargo Market







## Comparison of Scale between LAX and SEA and other WA Airports

## Average number of outbound flights per week

Airport	Widebody Pax	Freighters	Total
SEA	182	110	292
GEG	0	87	87
BFI	0	48	48
LAX	824	290	1,114
ONT	0	217	217
SFO	533	47	337
OAK	23	183	206
PDX	30	132	162
SLC	36	100	136

Source: Bureau of Transportation Statistics T-100

Segment Data, 2016

LAX generates over 1,100 widebody aircraft flights per week, as opposed to the 292 weekly flights at Sea-Tac.

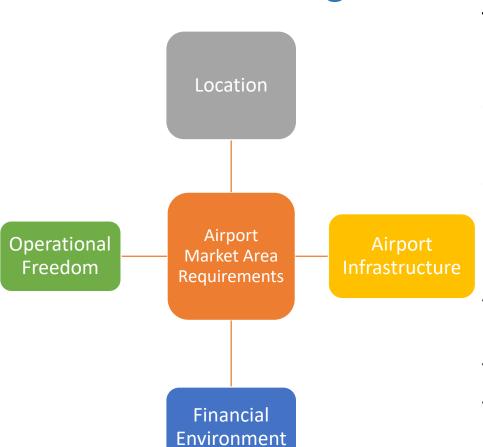
No other airports on the US West Coast can compete with LAX on capacity, frequency or number of destinations that can be serviced by shippers or freight forwarders.

Similarly, within the state of Washington, no other airports can provide the level and extent of air service provided by Sea-Tac.





## What Basic Components Are Needed to Attract & Maintain Air Cargo Air Service?



There are certain basic factors, or components, that airports need to satisfy to attract and maintain both passenger and air cargo service. These components can be divided into five distinct areas.

All five criteria are interrelated and are important to cargo carriers and forwarders, although priorities vary among different airline types.



### Factors Influencing Airline/Airport Choice

Market Area	Location	Infrastructure
Primary—up to 100 mi Secondary-within 400 mi Tertiary->400 mi	Fits Existing Network- different for integrator, belly & line haul freighter airlines	Runways- length, strength, redundancy, approaches, minimums, etc.
Connectivity between services (interlining) - airline, Road Feeder Service, regional Pick Up and Delivery	Close to Customers-% of pop (markets) within X miles or Y minutes of airport	Aircraft Parking & Ground Handling Capabilities
Freight Forwarders – multinational, local, specialty, etc.	Local Surface Access	Landside Facilities & Services- terminals, FIS, customs brokers, temp. control, etc.
Distribution Services- warehouses/DCs, cool chain, FTZs	Interstate Highway Connectivity	Interstate Highway Access





### Factors Influencing Airline/Airport Choice

Financial Environment	Operational Freedom
Operating Costs —landing fees, aircraft parking, facility leasing, fuel service charges, etc.	Permissions-related to routes, frequencies, pricing, slot controls, curfews
Transparency of Accounts – paying only for services utilized	Operational Flexibility-aircraft change of gauge, self-handling or ability to select among competing agents, ability to transfer between aircraft, 24/7 operations, etc.
Economic Incentive Packages	
	Ability to Use Intermodal Services





### Factors Influencing Airline/Airport Choice (Primary Criteria)

		Seattle-Tacoma International Airport	King County International Airport	Spokane International Airport	Snohomish County Paine Field	Grant County International Airport	Bellingham International Airport	Pasco-Kennewick Tri-Cities/ Wenatchee Pangborn Memorial/ Walla Walla Regional Airports
PRIMARY CRIT	ERIA							
	Distance from significant populations: Primary = up to 100 miles Secondary = within 400 miles Tertiary = >400 miles							
Market Area	Connectivity/Interlining (airline, road feeder service, regional pickup and delivery)							
	Freight Forwarders (multinational, local, specialty)							
	<b>Distribution Services</b> (warehouses/distribution centers, cool chain, foreign trade zones)							<b>!</b>
	<b>Fits Existing Network</b> (different for integrator, belly and line-haul freighter airlines)							
Location	Close to Customers (percentage of population [markets] within X miles or Y minutes of airport)							
	Local Surface Access							
	Interstate Highway Connectivity							
	Runways (length, strength, redundancy, approaches, minimums)							
1	Aircraft Parking and Ground-Handling Capabilities							
Infrastructure	Landside Facilities and Services (terminals, flight information service, customs brokers, temperature control)							
	Interstate Highway Access							

lote: For a given criteria, four filled squares are best then diminishing from three, two, etc





### Factors Influencing Airline/Airport Choice (Secondary Criteria)

_		Seattle-Tacoma International Airport	King County International Airport	Spokane International Airport	Snohomish County Paine Field	Grant County International Airport	Bellingham International Airport	Pasco-Kennewick Tri-Cities/ Wenatchee Pangborn Memorial/ Walla Walla Regional Airports
SECONDARY CRI	TERIA							
	Operating Costs (landing fees, aircraft parking, facility leasing, fuel service charges)							
Financial Environment	Transparency of Accounts (paying only for services utilized)							
	Economic Incentive Packages							
	Permissions (related to routes, frequencies, pricing, slot controls, curfews)							
Operational Freedom	Operational Flexibility (aircraft change of gauge, self-handling or ability to select among competing agents, ability to transfer between aircraft, 24/7 operations)							
	Ability to Use Intermodal Services							

Note: For a given criteria, four filled squares are best then diminishing from three, two, etc





## Assessment of Opportunities: Which airports in WA have key elements needed to attract air cargo?

- International non-integrator freighter operators
  - Charters
  - Scheduled service
- Non-integrator/passenger-belly cargo airlines
- Integrator/express all-cargo carriers
- Third-party logistics companies/airport based distribution centers











## Non-Integrator Freighter Operators

#### Air Charters

#### **Competitive Factors**

- Convenience
- Pricing
- Consistency

#### **Assessment**

- Cherry charters to Central WA
- Special charters to Paine Field,BFI

#### Scheduled Service

#### **Competitive Factors**

Strong local and secondary market

- Niche markets in Eastern WA/ Intermountain region
- Paine Field, BFI







## Non-Integrator Passenger/ Belly Cargo Operators

### **Competitive factors**

- Large market area for passenger and cargo
- Network of freight forwarders
- Widebody aircraft international service

- SEA is the only competitive WA state airport in this market
- Long-term possibilities at Spokane/GEG



1 Fedex



## Integrator/Express Airlines

### **Competitive factors**

- Strong primary & secondary markets
- Late pick up and early drop-off times to customers
- Fits within existing network

- Key gateways at SEA and BFI
- Overflow possibilities at Paine
- Growth of Spokane/GEG as PNW express distribution center



## Airport Based Logistics/ Distribution Centers/ Inland Ports



Network hubs for consolidation/ distribution of air, truck and rail freight and other related commercial activities.

Enables 3PLs the option to relocate SEA logistics activities to a number of remote hub sites at under-utilized WA airports.



# The Cargo Logistics Park/Inland Port Value Proposition

- Provide third party logistics providers with facilities that allows them to combine off-airport functions with onairport operations.
- Provide businesses engaged in international trade and logistics turnkey access to readily available facilities.
- Enable key partners to expand existing businesses by providing a suitable location close to existing operations.
- Provide additional space to re-locate various facilities and services such as mail sorting, ground service equipment (GSE) maintenance and repair and customs brokerage services off-airport freeing up on-airport properties.





# The Cargo Logistics Park/Inland Port Value Proposition

- Attract air cargo service as part of a larger multimodal distribution concept for airports with little or no air cargo.
- Help to mitigate the negative impacts of SEA/ Port of Seattle logistics activities while providing the private sector with a more efficient way of moving cargo through an alternative supply chain.
- Growth of jobs and secondary businesses to boost the economy of local communities.





- Sea-Tac can increase efficiencies by utilizing Port owned land adjacent to the airport to establish an integrated airport logistics park with both surface access and IT integration.
- Spokane International can further develop its airport business park into a fully integrated airport logistics park.
- Other airports in the state can create airport logistics centers that provide consolidation/ distribution of air, truck and rail freight and other related commercial activities, including remote TSA certified air cargo screening facilities (CCSFs) for air cargo destined for Sea-Tac.



### Conclusions

- Maintain and expand the existing integrator operations within WA State
- Attract new airlines within the industry, specifically the Chinese integrators SF Express (initiating direct widebody service to the US in 2019), YTO Airlines, and EMS Airlines
- Attract cherry air charter operations to central and eastern Washington airports
- Develop non-hub airports into centers for regional ground-based logistical operations, including ecommerce, to relieve pressures at SEA



### Conclusions

- Scheduled freighter service is a more realistic, longer term goal for some airports such as Paine, Spokane International and Grant County International
- Spokane International Airport will eventually attract wide-body passenger service, bringing with it the potential to grow their belly cargo potential
- A statewide strategy including specific steps (e.g. market analysis, incentives, etc.) will be developed in the next task



Strengths, Weaknesses Opportunities and Threats

What role can each airport play in the statewide strategy for air cargo?





#### Seattle-Tacoma International Airport: Strengths, Weaknesses, Threats and Opportunities

	Strengths		Weaknesses
•	Existing air field infrastructure	•	Limited relative economic and population base
•	Developed landside infrastructure	•	Limited air cargo terminals
•	Existing scheduled air cargo service	•	Inefficient cargo building utilization
•	Existing wide-body aircraft service	•	Limited land availability
•	Direct and through international service	•	Competing resource demands
•	Existing air cargo buildings	•	Seasonally unreliable highway access to Eastern Washington
•	Dominance of regional market	•	Congested local roadways
•	Interstate highway access	•	Relatively isolated U.S. Pacific Northwest geographic location
•	Growing local manufacturing base	•	Noise and land use compatibility
•	Access to primary manufacturing/retail markets	•	Limited federal inspection services capacity
•	Existing all-cargo carrier operations		
•	Good airline and truck connectivity		
•	Planned aircraft ramp capacity		
•	Size of local economic and population base		
•	Distance from large metro markets		
•	Existing air forwarder network		
•	Synergy with ocean port operations		
•	Pacific Rim location		
	Opportunities		Threats
•	Pacific Rim gateway	•	Restructuring of FedEx/DHL/Amazon operations
•	Regional e-commerce hub	•	Competition from Vancouver International Airport, Portland International Airport
•	Consolidation/distribution center for PNW	•	Overly congested highway access
•	Base for integrator airlines	•	Trucking vs. air service
•	International freighters	•	Economically weak airlines
	International charters	•	Oppressive air cargo security regulations
•	Contract logistics/ distribution centers	•	Global trade war
•	Sea-air intermodal opportunities	•	Global conflict
•	Linkages with off-airport facilities	•	Relocation of Delta Air Lines' Pacific gateway hub
•	Key link in the growing aerospace industry supply chain	•	Change in international air bilaterals
<u>.                                      </u>	Alternative to Ted Stevens Anchorage International Airport for trans-Pacific tech stop		





## **Spokane International Airport: Strengths, Weaknesses, Threats and Opportunities**

	Strengths		Weaknesses
-	Existing air field infrastructure	•	Relatively small economic and population base
•	Uncongested airside and landside facilities		No wide-body passenger aircraft service
•	Availability of cargo aircraft parking ramp		Limited direct or through international service
•	Availability of developable land		No line-haul airport-to-airport cargo carriers
	Existing joint use air cargo building		Limited presence of freight forwarders
	New Eastside cargo area		
	Existence of adjacent Airport Logistics Park		
•	Interstate highway access		
•	U.S. Customs		
	Access to secondary manufacturing markets		
	Access to high-value agricultural production		
•	Presence of integrated carriers		
	Port of Entry/federal inspection services		
•	Availability of labor and community support		
	Opportunities		Threats
•	Alternative to congested facilities at Sea-Tac and Boeing Field		Competition from Sea-Tac, Moses Lake, Boise, Great Falls
•	Regional e-commerce hub		Restructuring of FedEx/UPS/Amazon operations
•	Expansion of the presence of integrators		Trucking vs. air service
•	Perishables and high-value food products		Economically weak airlines
•	Growing Economy		Oppressive air cargo security regulations
•	International freighters		Global trade war
•	International charters		Global conflict
•	Contract logistics/ distribution center		
•	Intermodal opportunities		
•	Master planned on-airport development		
•	U.SCanadian cross-border freight		
	Inland port/Container Freight Station		





#### Kings County International Airport: Strengths, Weaknesses, Threats and Opportunities

	Strengths		Weaknesses
$\overline{\cdot}$	Existing air field infrastructure	•	Congested airside and landside facilities
•	Availability of cargo aircraft parking ramp	•	No wide-body passenger service
•	Availability of developable land	•	Lack of expansion potential
•	Existing air cargo buildings	•	Limited air cargo marketing program
•	Port of entry status and federal inspection services		
•	Boeing Field International's central geographic location		
•	Interstate highway access		
•	Growing local manufacturing base		
•	Access to primary manufacturing market		
•	Existing all-cargo carrier operations		
•	Availability of labor		
•	Distance from large metro markets		
	Opportunities		Threats
•	Base for integrator airlines	•	Restructuring of UPS operations
•	International freighters	•	Competition from Seattle-Tacoma International Airport,
•	Domestic and international charters		Vancouver International Airport, Portland International Airport
	Contract logistics/distribution center	•	Overly congested highway access
		•	Trucking vs. air service
		•	Economically weak airlines
		•	Oppressive air cargo security regulations
			Global trade war
		•	Global conflict





## **Snohomish County Paine Field Airport: Strengths, Weaknesses, Threats and Opportunities**

	<b>3</b> ,	•	***
	Strengths		Weaknesses
•	Existing air field infrastructure	•	No wide-body passenger aircraft service
•	Uncongested airside and landside facilities	•	Limited direct or through international service
•	Availability of cargo aircraft parking ramp	•	Limited presence of freight forwarders
•	Availability of developable land	•	Lack of community support
	Existing joint use air cargo building		
	Schedule passenger service		
	Interstate highway access		
•	U.S. Customs		
	Access to primary & secondary manufacturing markets		
	Port of Entry/federal inspection services		
	Opportunities		Threats
•	Alternative to congested facilities at Seattle-Tacoma International	•	Competition from Seattle-Tacoma International, Bellingham
	Airport and Boeing Field	•	Trucking vs. air service
•	Regional aerospace hub	•	Economically weak airlines
•	International freighters		Oppressive air cargo security regulations
•	International charters		Global trade war
•	Contract logistics/ distribution center		Global conflict
•	Intermodal opportunities		
•	Master planned on-airport development		
	United States–Canadian cross-border freight/Container Freight		





## **Grant County Paine Field Airport: Strengths, Weaknesses, Threats and Opportunities**

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	Strengths		Weaknesses
•	Existing air field infrastructure	•	Size of local economic and population base
•	Uncongested airside and landside facilities	•	Lack of scheduled airline service
•	Availability of cargo aircraft parking ramp	•	Lack of scheduled air cargo service
•	Availability of developable land	•	Lack of wide-body aircraft service
•	Existing air cargo buildings	•	No direct or through international service
•	Port of entry status and federal inspection services	•	Lack of scheduled Road Feeder Service
•	Moses Lake's central geographic location	•	Trucking vs. air service
•	Interstate highway access	•	Limited local freight forwarder network
•	Growing local manufacturing base	•	Lack of recognition in the marketplace
•	Access to secondary manufacturing market		
•	Relatively low development costs		
•	Availability of labor		
•	Availability for clean slate development		
	Opportunities		Threats
•	International cherry charters	•	Competition from Spokane International Airport, Yakima Air
•	Inland Port/CFS		Terminal/McAllister Field
•	Alternative to Seattle-Tacoma International for air cherry charters	•	Trucking vs. air service
•	Consolidation/distribution center for state	•	Economically weak airlines
•	International freighters	•	Oppressive air cargo security regulations
•	Domestic and international charters	•	Global trade war
•	Contract logistics/ distribution center	•	Global conflict
•	Intermodal opportunities		
•	Master planned on-airport development		
•	Container Freight Station		
	Export consolidation		





#### Bellingham International Airport: Strengths, Weaknesses, Threats and Opportunities

			•
	Strengths		Weaknesses
•	Existing air field infrastructure	-	Size of local economic and population base
•	Uncongested airside and landside facilities		Lack of scheduled air cargo service
•	Availability of cargo aircraft parking ramp		Lack of wide-body aircraft service
•	Availability of developable land		No direct or through international service
•	Existing air cargo buildings		Lack of scheduled Road Feeder Service
•	Port of entry status and federal inspection services		Limited runway length
	Border location	-	Limited local freight forwarder network
	Interstate highway access	-	Lack of recognition in the marketplace
	Growing local manufacturing base		
	Existing Port management structure		
	Existing all-cargo carrier operations		
	Distance from large metro markets		
	Opportunities		Threats
•	United States–Canadian cross-border freight		Restructuring of FedEx/UPS operations
•	Domestic and international charters		Competition from Seattle-Tacoma International Airport, Vancouver
•	Contract logistics/ distribution center		International Airport
	Intermodal opportunities		Overly congested highway access
	Container Freight Station		Trucking vs. air service
	Export consolidation		Economically weak airlines
	·		Oppressive air cargo security regulations
			Global trade war
		-	Global conflict





#### Yakima, Tri-Cities, Walla Walla and Pangborn Field Airports: Strengths, Weaknesses, Threats and Opportunities

	Strengths		Weaknesses
•	Existing air field infrastructure	•	Size of local economic and population base
•	Uncongested airside and landside facilities	•	Limited scheduled air cargo service
•	Availability of cargo aircraft parking ramp	•	Lack of wide-body aircraft service
•	Availability of developable land	•	No direct or through international service
•	Existing air cargo buildings	•	Limited runway length
•	Port of entry status and federal inspection services	•	Limited local freight forwarder network
•	Central Washington geographic location	•	Lack of recognition in the marketplace
•	Interstate highway access	İ	
	Availability of labor		
	Opportunities		Threats
•	Inland Port	•	Restructuring of FedEx/UPS operations
•	Domestic charters	•	Competition from Grant County International Airport, Spokane
•	Contract logistics/ distribution center		International Airport, Seattle-Tacoma International Airport
•	Intermodal opportunities	•	Economically weak airlines
•	Master planned on-airport development	•	Other local/regional logistics parks
•	Container Freight Station	İ	
•	Export consolidation		
•	Domestic and international charters		
•	Contract logistics/ distribution center		
•	Intermodal opportunities		





## **Discussion for Statewide Strategy**

Which opportunities seem most intriguing? What should the State's Role be?





## Previous Stakeholder Panel Discussion of State Role and Interest

- Identification of infrastructure needs to support air cargo competitive advantage
- Analysis of economic benefits and other impacts
- Identify tools to support competitive advantage
  - Streamlined data systems and measurements
  - Define and market the state airport system
  - Land use and other policy guidance
- Market intelligence and trend analysis
- Convening partners
- Funding support





## Debrief on Staff Work Group Discussion

- Define and market state airport network as a system
- Identify roles for various airports
  - Designations
  - Use in marketing/branding
- Explore Inland Port Concept
- Consider investment in broader transportation network, individual airports and marketing
- Joint marketing with State support
  - International venues
  - Freight Forwarders
  - Key Cargo trade groups (e.g. tree freight growers)
- Highlight FTZ benefits as part of statewide marketing
- Potential legislation on workforce issues (pilot and maintenance)
- Consider what other states are doing





### **Next Steps**

- JTC briefing July 19 Olympia
- ■Statewide Business Strategy Summer
- Final Stakeholder Panel Meeting, October 2 at Boeing Field