

# SEA-TAC AIR CARGO

March 24, 2015

- **Sea-Tac air cargo overview**
- **Historical trends**
- **Air cargo business development**
- **Existing facilities**
- **Capital projects**
- **Sustainable Airport Master Plan (SAMP)**
  - Goals
  - Assumptions
  - Forecast & facility requirements
  - Challenges
  - Next Steps



## *Definitions: air cargo terminology*

### **Air cargo can be categorized in terms of type, routing, and method of transport**

#### **▪ Types of air cargo**

- Air freight
- Air mail

#### **▪ Air cargo routes**

- Domestic, including Alaska and Hawaii
- International

#### **▪ Methods of transport**

- All-cargo freighters
- “Belly cargo” carried on passenger aircraft



## *SEA is the #1 cargo airport in the Pacific Northwest*

- **Sea-Tac ranking among airports in regard to cargo tonnage**
  - #19 in United States
  - #1 in the Pacific Northwest
  - #3 on the West Coast (*in terms of just international freight*)
- **\$13.6 billion in international commodity trade (51.2% exports) – ranked #15 by Department of Commerce airport international trade statistics**
- **Air cargo activity at Sea-Tac provides the region a \$22.7 billion economic value\***
  - 119,685 related jobs
  - \$5.5 billion in wages & salaries
  - \$520.7 million in state & local taxes

\*source: Martin Associates, 2013 Economic Impact of the Port of Seattle

*Air cargo program contributed approximately \$9.5 million in 2014 revenue*

- **Freighter landing fees contributed approximately \$5.5 million**
  - Freighter revenue was 7% of total airfield cost-recovery requirement
  - Effectively reduced Cost per Enplanement (CPE) by \$0.29
- **Land and space leases in the cargo/commercial area contributed \$3.2 million**
  - Total could increase if existing building vacancy re-leased
  - Long-term reduction in overall cargo area may reduce future lease revenue
- **Aircraft activity fees on cargo hardstands added \$0.75 million**
  - Higher activity levels increased fee revenue for 2014
  - Tariff increases took effect January 2015; should further increase revenue

# SEA air cargo overview: International service

## Diverse international air trade network supported growth in 2014



Value and tonnage of important trade partners and commodities mostly increased in 2014 vs. 2013

### Top Countries for Air Trade

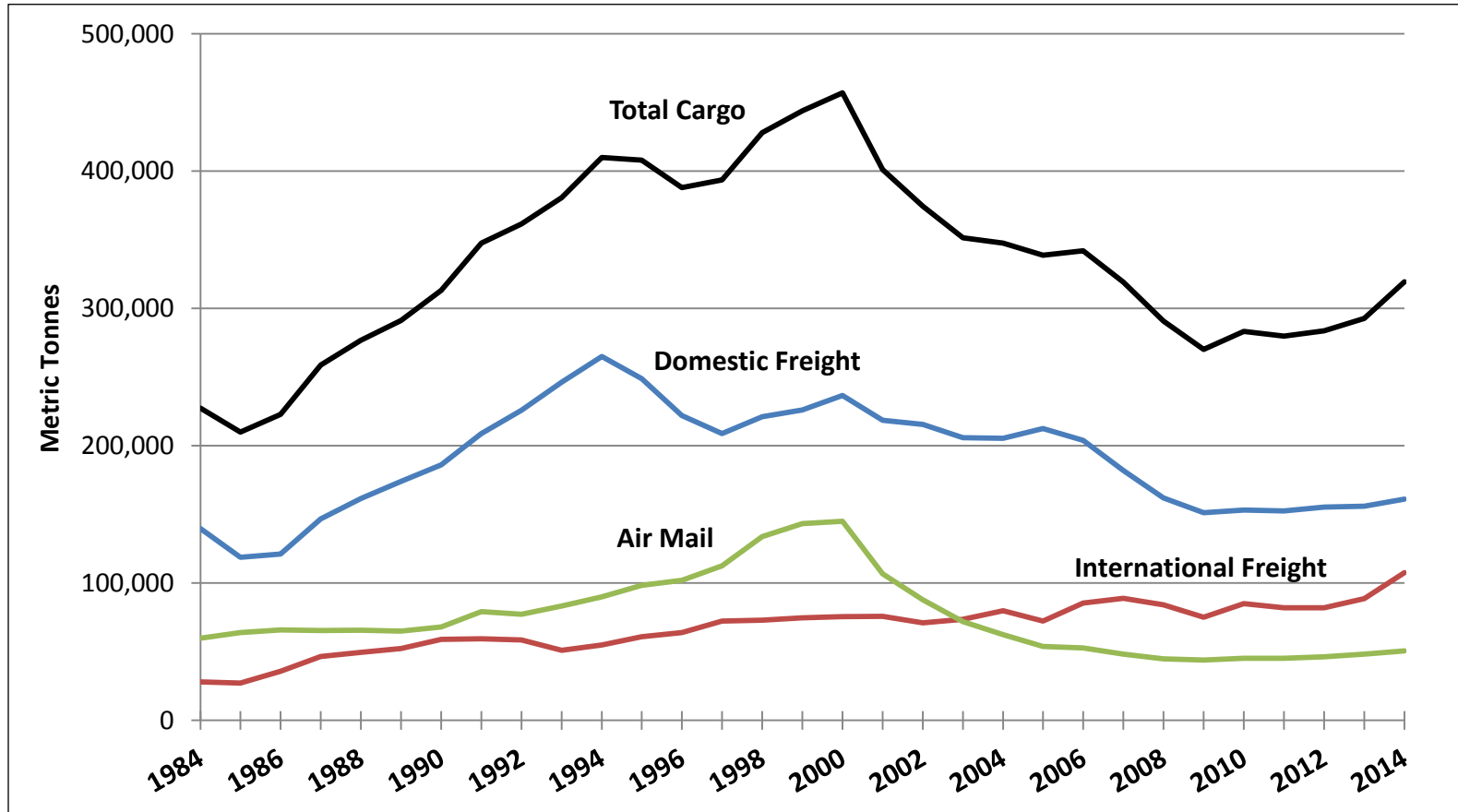
| By Dollar Value |        | By Metric Tons |        |
|-----------------|--------|----------------|--------|
| United Kingdom  | +33.4% | China          | +1.1%  |
| China           | +31.8% | Japan          | -5.2%  |
| Japan           | -5.5%  | Taiwan         | +44.7% |

### Top Air Trade Commodities

| By Dollar Value           |        | By Metric Tons       |        |
|---------------------------|--------|----------------------|--------|
| Machinery                 | +30.9% | Machinery            | +9.7%  |
| Electrical Machinery      | +21.6% | Electrical Machinery | +25.8% |
| Aerospace Parts/Equipment | -7.1%  | Fruit (Cherries)     | +44.3% |

Source: U.S. Department of Commerce, Bureau of Census

## General trend of increasing cargo volumes since 2009



Significant decreases in Domestic Freight and Air Mail lowered Total Air Cargo from its peak in 2000, however International Freight continues to increase

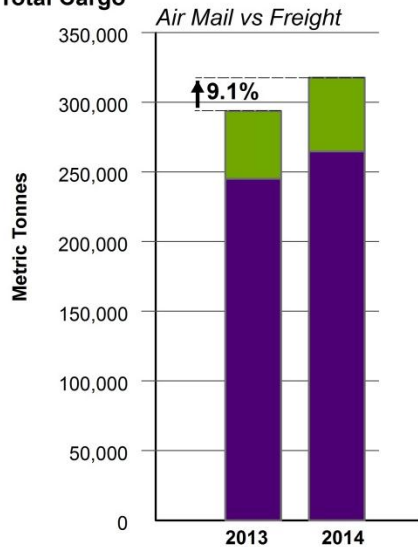
# Historical trends: 2014 in review

## Total cargo in 2014 up 9.1% over 2013

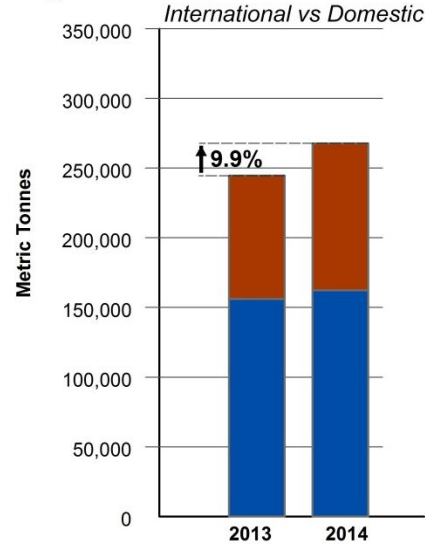
### Legend

- Air Mail
- Freight
  - International
  - Domestic
  - Belly
  - All Cargo

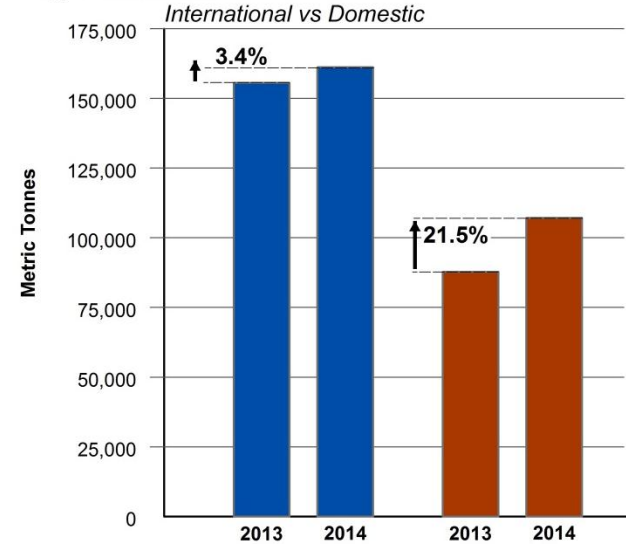
### Total Cargo



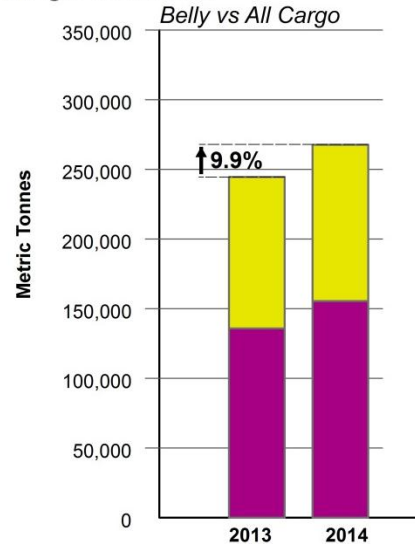
### Freight Breakdown



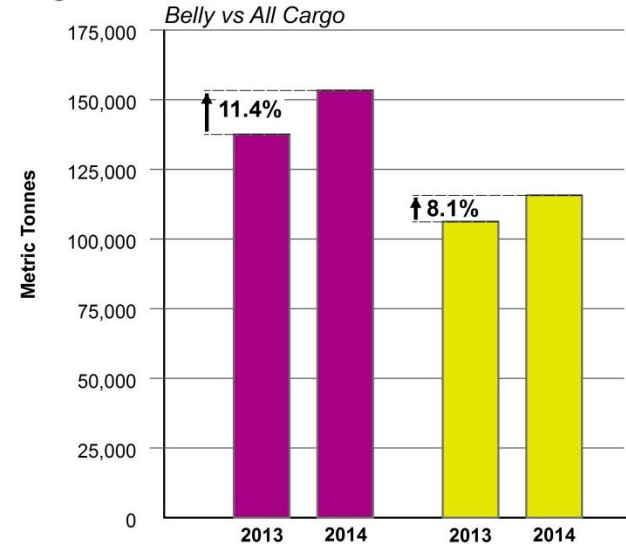
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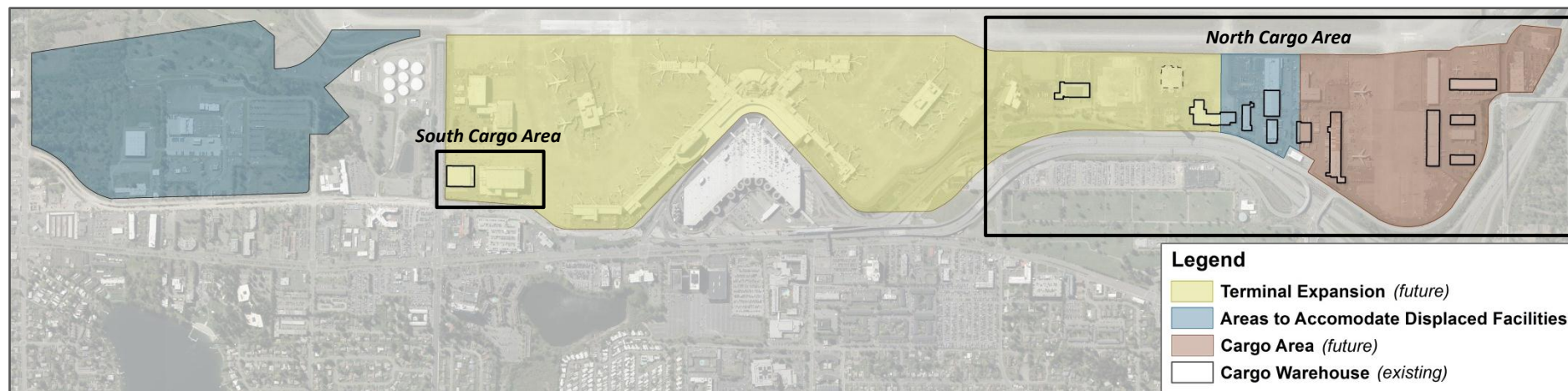




## *Marketing to attract more air cargo, cognizant of constraints*

- **Provide adequate facilities to address growing cargo demand**
  - SAMP assessment identified inefficient configuration of existing cargo facilities
  - Existing ramp area lacks capacity for cargo facility expansion
  - Redevelopment should address constraints prior to marketing for new service
  
- **Retain and support existing customer base**
  - Provide exemplary customer service and stakeholder outreach
  
- **Attract more international cargo capacity and routes**
  - Focus on competitive service gaps – unserved non-stop cities
  - Add new international freighter services
  - Facilitate growth in international belly cargo service

## Warehouse locations spread across the airport



### ■ Cargo warehouse facilities

- 12 total on-airport cargo warehouses interspersed throughout ramp area
- Primarily serve as “pass-through” facilities
- Some accommodate “truck-to-truck” operations, ground service equipment maintenance and a variety of other functions
- Former United Airlines cargo building under evaluation for alternative use

### ■ Cargo hardstand facilities

- Recent hardstand projects provided capacity to meet near-term demand
- Passenger aircraft frequently remain over night on cargo hardstands

## *Recent hardstand projects provided critical near-term capacity*

### ■ **Freighter activity**

- Six major airlines provide scheduled freighter service at Sea-Tac
  - Asiana, Cargolux, China Airlines, EVA, FedEx, and Korean Air
- Three new airlines conducted seasonal charter service in 2014
  - Atlas Air, China Cargo Airlines, and Nippon Cargo Airlines
- In 2014 the Airport saw 10.4% more calls by the largest type of freighters (*Boeing 747s & Antonov 124s*)

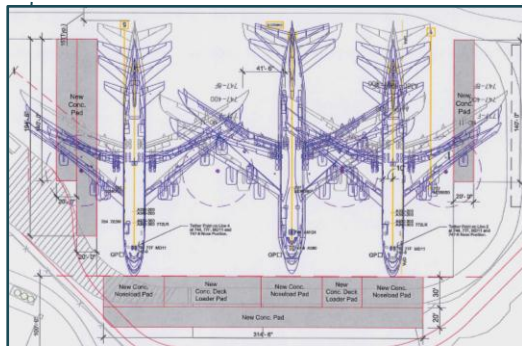
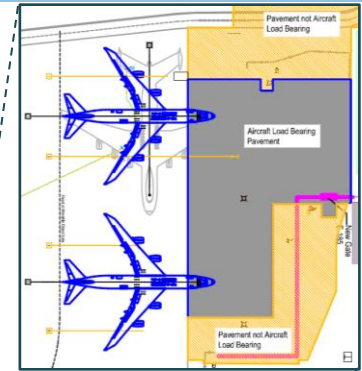
### ■ **Cargo 2 and Cargo 6 Freighter parking ramp expansion projects**

- Purpose: to extend hardstand to better accommodate increasing size and frequency of the largest freighter operations
- Construction approved by Commission in 2013
- Project Cost: \$23.1 million
- Status: Completion expected by Q2 2015

## Hardstand projects accommodate 747-800 nose load operations

### ■ Cargo 2 Hardstand Expansion project

- Demolished cargo warehouse
- Expanded hardstand to accommodate 2 Group VI freighters
- Added ground power



### ■ Cargo 6 Improvements project

- Expanded hardstand to accommodate 2 Group VI simultaneous nose load operations
- Added ground power
- Added fuel hydrant pits

## Goals

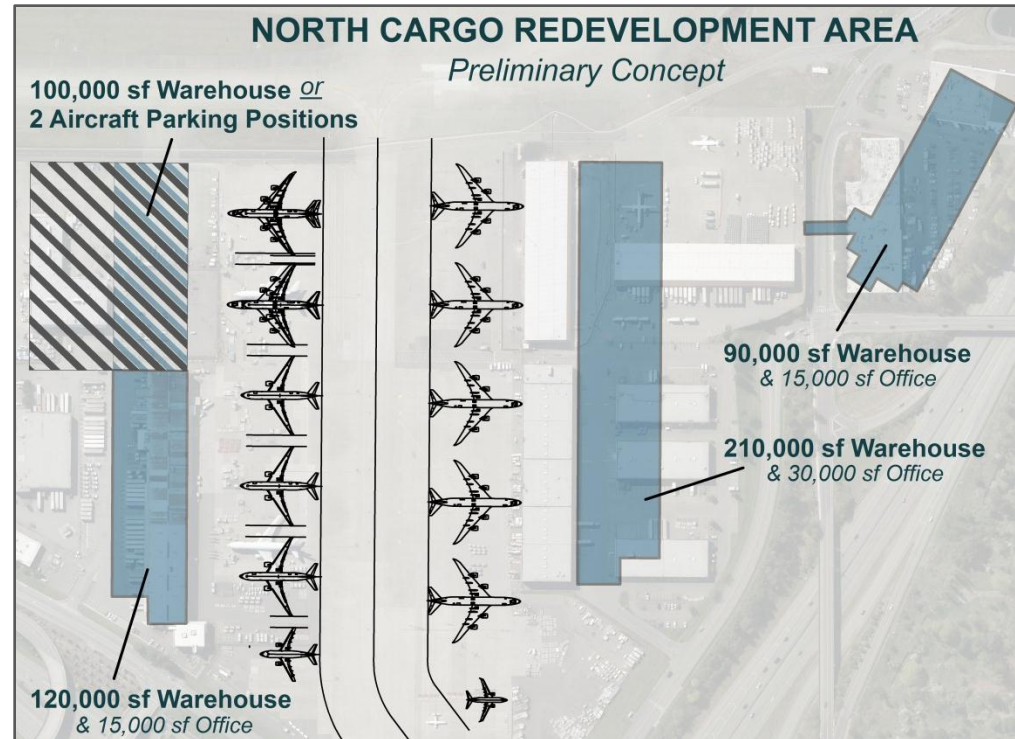
- **Maximize future warehouse utilization through more efficient layout of facilities with adequate and balanced capacity**
  - Hardstand for aircraft parking in close proximity to airside of cargo warehouses
  - Cargo staging/loading areas on the airside of warehouses
  - Truck staging, maneuvering, and dock stations on landside of warehouses
  - Sufficient warehouse depth to facilitate cargo pass through operations and potentially accommodate mechanical infrastructure
- **Reserve adequate space to ensure flexibility for future cargo projects**
- **Maintain sufficient cargo warehouse and hardstand capacity throughout phased implementation of SAMP capital program**

## *Assumptions*

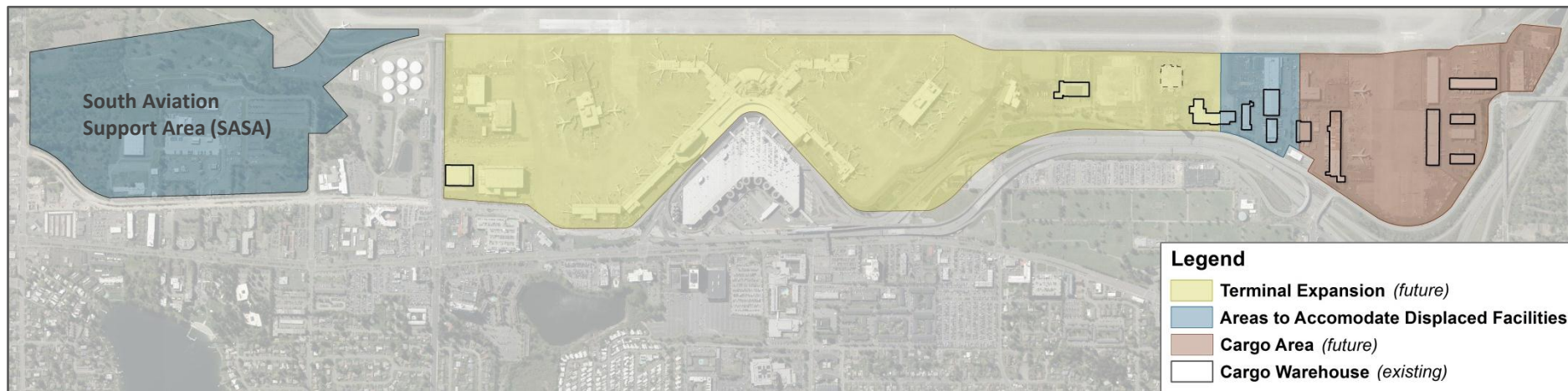
- **Higher warehouse utilization rates can be achieved through mechanization**
  
- **Land use prioritization/hierarchy**
  - Terminal
  - Airfield
  - Landside
  - **Cargo**
  - Airline support
  - Airport support

## Redeveloped North Cargo area may be adequate to accommodate 2034 demand

- **442,000 metric tonnes forecasted cargo volumes in 2034** (*organic growth*)
  - 38% increase over 2014
  - 59% of Century Agenda goal
- **Warehouse requirement**
  - 400,000 - 500,000 *sf* in 2034
  - 700,000 - 900,000 *sf* to achieve Century Agenda goal
- **Preliminary redevelopment concept**
  - 420,000 - 520,000 *sf* of warehouse
  - 12 - 14 aircraft parking positions
  - Future hardstand immediately south could be shared use with passenger aircraft
- **Cargo demand beyond 20-year organic growth will require development of additional facilities**
  - Potential for cargo in the South Aviation Support Area (SASA)



## Primary challenge – Phasing to meet on-going and long-term demand



- **Maintain sufficient cargo warehouse and hardstand capacity**
  - Terminal expansion impacts cargo facilities
  - Redevelopment of north cargo area impacts existing cargo facilities
    - Need slack capacity prior to redevelopment
    - Long lead time for South Aviation Support Area site preparation
- **Facilitate tenant relocations throughout phased redevelopment**
- **Facilitate trade and business growth to meet regional economic demand**



## *Determine airfield and terminal/gate needs to clarify opportunities for cargo*

- **Model airfield and terminal ramp area**
  - Determine airfield capacity & benefit of potential airfield improvement projects
  - Confirm gate requirement and refine gate expansion concepts
- **Determine landside and airport/airline support facility requirements to support preferred terminal concept**
- **Integrate cargo and other airport facilities into a comprehensive land use plan**
  - Allocate land to cargo facilities based on land use prioritization/hierarchy
  - Determine if/how cargo could be accommodated in the South Aviation Support Area (SASA)
- **Develop phased implementation plan for entire SAMP capital program – including cargo facilities redevelopment**