Joint Global Initiatives and Economy & Infrastructure Council Sessions

Los Angeles Chamber of Commerce

Wednesday, April 20, 2011
Generally speaking, air-eligible cargo consists of those goods that are shipped via air, rather than via sea or surface, due to a good’s:

- High value/Rarity (diamonds, organs for transplant, iphones, flat screen televisions)
- Just-in-time delivery cycle (automobile and/or machine parts, medical equipment)
- Perishable nature (fruit, flowers, organs for transplant)

Exception: if it needs to “get there quickly,” anything can become air-eligible cargo

- Rahm Menem, Emirates Airlines: “If time is sufficiently of the essence, a bucket of beans can become air cargo.”
How Does Air Cargo Activity Contribute to the Los Angeles County Economy?

- Growth or decline in air cargo traffic at LAX and/or LA/Ontario is typically an indicator of the health of international trade within Southern California
  - Strong growth in air cargo exports and imports contribute greatly to the health of many sectors of the Southern California (and U.S.) economy, including, among others:
    - Logistics/Transportation/Warehouse/Distribution
    - Commercial Airline Industry
    - Finance/Banking
    - Goods Consumption (electronics, perishables)
    - Manufacturing (just-in-time)
    - Health Care (organs, equipment)
    - Hospitality (flowers, fruit, fish)
Air cargo traffic generates a greater economic impact within Los Angeles County than does passenger traffic

- Each daily trans-oceanic wide body flight to LAX generates:
  - $620+ million in annual economic impact within Los Angeles County
  - 3,000+ jobs within the County
  - 1 of every 18-20 jobs in Southern California are directly attributable to LAX

- Approximately 80% of this economic impact, including jobs, is attributable to air cargo traffic, as opposed to passenger traffic

- Historical rule of thumb: air cargo accounts for less than 0.5% of total volume/weight of goods exported, but 45%+ of value
The Impact of Air Cargo Within the Southern California Economy
LAX is the #4 U.S. Air Cargo Gateway, in Terms of Weight… (#3 for Exports; #4 for Imports)

Top 10 U.S. Air Cargo Gateway Airports, by Weight (Metric Tonnes) C Y 2010

Source: WISER air cargo database, for years noted.
... but the #3 U.S. Air Cargo Gateway by Value
(#2 for Exports; #3 for Imports)

Top 10 U.S. Air Cargo Gateway Airports, by Value ($US Millions)
C Y 2010

<table>
<thead>
<tr>
<th>Airport</th>
<th>Imports</th>
<th>Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York JFK</td>
<td>$160,000</td>
<td></td>
</tr>
<tr>
<td>Chicago O'Hare</td>
<td>$140,000</td>
<td></td>
</tr>
<tr>
<td>LAX</td>
<td>$120,000</td>
<td></td>
</tr>
<tr>
<td>New Orleans</td>
<td>$100,000</td>
<td></td>
</tr>
<tr>
<td>San Francisco</td>
<td>$80,000</td>
<td></td>
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<tr>
<td>Miami</td>
<td>$60,000</td>
<td></td>
</tr>
<tr>
<td>Anchorage</td>
<td>$40,000</td>
<td></td>
</tr>
<tr>
<td>Dallas/Fort Worth</td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>Atlanta</td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>Cleveland</td>
<td>$20,000</td>
<td></td>
</tr>
</tbody>
</table>

Source: WISER air cargo database, for years noted.
LAX Also Compares Well with its Three Peer Air Cargo Gateways (New York City JFK, Miami, and Chicago O’Hare) in Terms of Value per Tonne

Major U.S. Air Cargo Gateway Airports, by Value per Metric Tonne ($US)
C Y 2010

Source: WISER air cargo database, for years noted.
China Accounts for **48%** of LAX Air Cargo Imports, by **Weight**, but from Vietnam has Averaged Annual Growth of **25.8%** Since 1999

**Top 10 Origins of LAX Air Cargo Imports, by Weight (millions of KG)**

**CY 2010**

![Graph showing the top 10 origins of LAX air cargo imports by weight.](image)

Source: WISER air cargo database, for years noted.
China Accounts for 35.2% of the Value of Air Cargo Imports at LAX, and it has Generated Average Annual Growth of 17.1%, Exceeding India’s 14.6%

Top 10 Origins of LAX Air Cargo Imports, by Weight (millions of KG)
CY 2010

Source: WISER air cargo database, for years noted.
Japan Remains the #1 Destination for Air Cargo Exports from LAX, with 14.6% of the Total Volume, but it has Seen an AAGR of **-0.8%** Since 1999 (While China has Generated AAGR of **15.3%**)

**Top 10 Destinations of LAX Air Cargo Exports, by Weight (millions of KG)**

CY 2010

Source: WISER air cargo database, for years noted.
China Surpassed Japan as the #1 Destination of LAX Air Cargo Exports by Value, in 2010, and the 7 Asia/Pacific Countries in the Top 10 Account for 50.5% of the Value of all Exports

Top 10 Destinations of LAX Air Cargo Exports, by Value ($US millions)
CY 2010

Source: WISER air cargo database, for years noted.
LAX’s Share of California’s Air Cargo Imports Value Grew from 43.4% in 1999 to 64.3% in 2010, While SFO’s Share has Fallen from 55% to 35.6%
LAX’s Share of California’s Volume of Exports has Grown from 59.3% to 70.8% Since 1999, While SFO’s Share has Fallen From 37.8% to 28.3%

California Air Cargo Exports, by Weight (Millions of Kilograms)
1999-2010

Source: WISER air cargo database, for years noted.
56.4% of the Value of Air Cargo Exported from California Left LAX During 2010, up from 51.9% in 1999

California Air Cargo Exports, by Value ($US Millions) 1999-2010

Source: WISER air cargo database, for years noted.
In terms of the Unit Value of Air Cargo Exports, LAX has Consistently Lagged Behind SFO and Other California Airports Since 1999

Air Cargo Traffic at California Airports, by Value per Kilogram ($US per KG)
1999-2010

Source: WISER air cargo database, for years noted.
LAX Accounted for Just 0.5% of the *Weight* of Imports and Exports Passing Through Southern California’s Ports…

Total International Trade Goods in Southern California, by Weight (Millions of Kilograms)  
*CY 2010*

- **Port of Long Beach**: 36.40%  
- **Port of Los Angeles**: 63.10%  
- **LAX**: 0.50%

Source: WISER air cargo database, for years noted.
...but 11.4% of the Value

Total International Trade Goods in Southern California, by Value ($US)
CY 2010

- Port of Long Beach: 36.40%
- Port of Los Angeles: 63.10%
- LAX: 0.50%

Source: WISER air cargo database, for years noted.
While a Significant Percentage of the Region’s Value of Imported Goods Pass Through LAX…

Imported Goods in Southern California
CY 2010

By Value ($US)

- Port of Los Angeles: 72.3%
- Port of Long Beach: 20.0%
- LAX: 7.7%
- Other ports: 0.5%

By Weight (Kilograms)

- Port of Los Angeles: 73.2%
- Port of Long Beach: 26.3%
- LAX: 0.5%
- Other ports: 26.3%

Source: WISER air cargo database, for years noted.
It is in the Area of Exports Where LAX Plays its Most Important Role in International Trade

Exported Goods in Southern California
CY 2010

By Value ($US)

- Port of Long Beach: 36.7%
- LAX: 24.1%
- Port of Los Angeles: 39.1%

By Weight (Kilograms)

- Port of Long Beach: 52.1%
- Port of Los Angeles: 47.9%

Source: WISER air cargo database, for years noted.
One Area of Concern: While the Value of Air Cargo Imports and Exports at LAX has Weathered Recent Economic Crises Well…

Air Cargo Traffic at LAX, by Value ($US Millions) 1999-2010

Source: WISER air cargo database, for years noted.
... as has the Weight of Air Cargo Traffic at the Airport...

Air Cargo Traffic at LAX, by Weight (Millions of Kilograms)
1999-2010

Source: WISER air cargo database, for years noted.
The *Unit Value* ($/KG) of Air Cargo Exports at the Airport has Consistently Fallen During the Past Decade

**Air Cargo Traffic at LAX, by Value per Kilogram ($US per KG) 1999-2010**

Source: WISER air cargo database, for years noted.
Another way to Look at This: While the Value of Air Cargo Imports at LAX has Grown by More Than $9.2 US Billion Since 1999...

Air Cargo Imports at LAX, by Value ($US Millions) 1999-2010

Source: WISER air cargo database, for years noted.
... the *Value* of Exports at the Airport is a Mere $1 US Billion Above 1999 Levels

**Air Cargo Exports at LAX, by Value ($US Millions) 1999-2010**

Source: WISER air cargo database, for years noted.
Despite Volatility, the Volume of Air Cargo Exports at LAX Ended 2010 Just Below 2007’s High-Water Mark

Air Cargo Exports at LAX, by Weight (Millions of Kilograms) 1999-2010

Source: WISER air cargo database, for years noted.
What Opportunities Are There on the Horizon?
Growth Opportunity #1: An Asia-South America Gateway
LAX is the Ideal US Gateway to Connect South America and Asia

- A Large and Growing Market Exists

- LAX is the #1 U.S. Passenger and Cargo Traffic Gateway to Asia and the #6 Passenger / #3 Cargo Traffic Gateway to South America

- At Present Only About 10 Percent of South American – Asia Passengers Travel via LAX, Down from 35 Percent in 2002

- Expanded South America – LAX Service Would Increase Market Share and Provide an Efficient Link Between Two Key Regions
Trade Between Asia and South America has More than Quadrupled Between 1999 and 2009

Source: United Comtrade

Trade Between Asia and South America has More than Quadrupled Between 1999 and 2009

Asia Foreign Trade with South America (Value)
1999-2009

USD billions

180
160
140
120
100
80
60
40
20
0

1999
2009

$32.90 B
$165.87 B

Brazil: 19.6%
Chile: 17.8%
Argentina: 10.7%
Peru: 20.6%
Colombia: 18.5%
Other SouthAm: 16.7%

Note: South America defined as: Brazil, Chile, Argentina, Peru, Colombia, Venezuela, Ecuador, Paraguay, Uruguay, Bolivia, French Guiana, Guyana, Suriname; while Asia is defined as: China, Japan, Rep. of Korea, India, Other Asia, Thailand, China, Hong Kong SAR, Indonesia, Malaysia, Singapore, Viet Nam, Philippines, Bangladesh, Pakistan, Dem. People's Rep. of Korea, Sri Lanka, Cambodia, Myanmar, Afghanistan, China, Macao SAR, Maldives, Mongolia, Nepal, Brunei Darussalam, Lao People's Dem. Rep., Timor-Leste, Bhutan

Source: United Comtrade
The Growth is Driven in Large Part by China, but Japan, South Korea and India Have Also Experienced Strong Increases

Asia Foreign Trade with South America (Value) 1999-2009

- **$32.90 B** in 1999
- **$165.87 B** in 2009

**1999-2009 CAGR**
- **Total Asia: 17.6%**
- Other Asia: 12.3%
- Hong Kong: 10.6%
- Thailand: 17.8%
- India: 21.5%
- S. Korea: 14.1%
- Japan: 6.6%
- China: 32.0%

Source: United Comtrade

Note: South America defined as: Brazil, Chile, Argentina, Peru, Colombia, Venezuela, Ecuador, Paraguay, Uruguay, Bolivia, French Guiana, Guyana, Suriname; while Asia is defined as: China, Japan, Rep. of Korea, India, Other Asia, nes, Thailand, China, Hong Kong SAR, Indonesia, Malaysia, Singapore, Viet Nam, Philippines, Bangladesh, Pakistan, Dem. People's Rep. of Korea, Sri Lanka, Cambodia, Myanmar, Afghanistan, China, Macao SAR, Maldives, Mongolia, Nepal, Brunei Darussalam, Lao People's Dem. Rep., Timor-Leste, Bhutan
Trade Between Asia and South America is Led by Brazil and Followed by Chile

Share of Asia Foreign Trade with South America by Country
2009

- Brazil 45.6%
- Chile 20.6%
- Argentina 10.7%
- Peru 7.7%
- Colombia 5.3%
- Venezuela 4.0%
- Ecuador 2.4%
- Paraguay 1.8%
- Bolivia 1.1%
- Uruguay 1.0%

Other South America 54.4%

Source: UN Comtrade, Suriname, Guyana and French Guiana data not yet released for 2009
Consistent with Trade, South American Visitors to Asia Have Risen an Impressive 23 Percent Per Year from 2003 to 2008

Tourist Arrivals to Asia by Origin
2003-2008

Visitors Thousands

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other South America</td>
<td>127.88 K</td>
<td>364.13 K</td>
</tr>
<tr>
<td>Peru</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venezuela</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colombia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argentina</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2003-2008 CAGR
Total SAM: 23.3%

Other SouthAm: 27.3%
Peru: 16.9%
Chile: 26.3%
Venezuela: 16.0%
Colombia: 27.0%
Argentina: 23.6%
Brazil: 24.8%

Note: South America includes: Brazil, Argentina, Colombia, Venezuela, Chile, Peru, Ecuador, Bolivia, Paraguay, Uruguay, Suriname, Guyana, French Guiana; while Asia includes: China, Japan, Thailand, India, Malaysia, South Korea, Singapore, Cambodia, Nepal, Taiwan, Philippines, Maldives, Sri Lanka, Pakistan, Mongolia, Bhutan, Bangladesh

Source: United Nations World Tourism Organization (UNWTO)
Consistent with Trade, South American Visitors to Asia Have Risen an Impressive 23 Percent Per Year from 2003 to 2008

Tourist Arrivals to Asia by Destination
2003-2008

- Other Asia: $127.88 K
- South Korea: $364.13 K
- Malaysia: Other Asia: $127.88 K
- India: $364.13 K
- Thailand: Other Asia: $127.88 K
- Japan: $364.13 K
- China: $364.13 K

2003-2008 CAGR
Total SAM: 23.3%

Other Asia: 26.7%
S. Korea: 13.3%
Malaysia: 17.7%
India: 19.5%
Thailand: 25.6%
Japan: 8.5%
China: 31.3%

Note: South America includes: Brazil, Argentina, Colombia, Venezuela, Chile, Peru, Ecuador, Bolivia, Paraguay, Uruguay, Suriname, Guyana, French Guiana; while Asia includes: China, Japan, Thailand, India, Malaysia, South Korea, Singapore, Cambodia, Nepal, Taiwan, Philippines, Maldives, Sri Lanka, Pakistan, Mongolia, Bhutan, Bangladesh

Source: United Nations World Tourism Organization (UNWTO)
South America Also has a Strong Japanese, Chinese and Korean Population of Over 3 Million

Japan, China and Korean Population as Percent of Total Country Population

- Brazil: 1.5 million Japanese, 208,000 Chinese, 48,419 Koreans
- Peru: 1 million Chinese, 92,622 Japanese
- Venezuela: 77,000 Chinese
- Argentina: 60,000 Chinese, 22,024 Koreans, 34,000 Japanese

Source: Japan Ministry of Foreign Affairs, Taiwan Overseas Compatriot Affairs Commission Republic of China, Korea Ministry of Foreign Affairs and Trade (http://www.mofat.go.kr)

Note: Data Not Easily Available for Other Asian Countries
The Total Asia – South America Market is Estimated at Almost 920,000 Annual Passengers

### Top South American – Asia Adjusted O&D Markets

**CY 2002 - YE 2Q 2010**

<table>
<thead>
<tr>
<th>Rank</th>
<th>South Am Cntry</th>
<th>Asian Cntry</th>
<th>YE 2Q 10 Annual</th>
<th>PDEW</th>
<th>AAG from CY 02</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brazil</td>
<td>Japan</td>
<td>146,296</td>
<td>200</td>
<td>-1.0%</td>
</tr>
<tr>
<td>2</td>
<td>Brazil</td>
<td>China</td>
<td>97,657</td>
<td>134</td>
<td>19.0%</td>
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<tr>
<td>3</td>
<td>Peru</td>
<td>Japan</td>
<td>62,010</td>
<td>85</td>
<td>8.1%</td>
</tr>
<tr>
<td>4</td>
<td>Venezuela</td>
<td>China</td>
<td>55,621</td>
<td>76</td>
<td>39.0%</td>
</tr>
<tr>
<td>5</td>
<td>Brazil</td>
<td>India</td>
<td>39,193</td>
<td>54</td>
<td>20.9%</td>
</tr>
<tr>
<td>6</td>
<td>Brazil</td>
<td>South Korea</td>
<td>38,439</td>
<td>53</td>
<td>13.8%</td>
</tr>
<tr>
<td>7</td>
<td>Argentina</td>
<td>China</td>
<td>34,750</td>
<td>48</td>
<td>25.9%</td>
</tr>
<tr>
<td>8</td>
<td>Brazil</td>
<td>Hong Kong</td>
<td>32,567</td>
<td>45</td>
<td>7.8%</td>
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<tr>
<td>9</td>
<td>Argentina</td>
<td>Japan</td>
<td>21,015</td>
<td>29</td>
<td>10.4%</td>
</tr>
<tr>
<td>10</td>
<td>Brazil</td>
<td>Philippines</td>
<td>19,252</td>
<td>26</td>
<td>14.7%</td>
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<tr>
<td>11</td>
<td>Chile</td>
<td>China</td>
<td>17,883</td>
<td>24</td>
<td>18.6%</td>
</tr>
<tr>
<td>12</td>
<td>Colombia</td>
<td>China</td>
<td>14,613</td>
<td>20</td>
<td>40.3%</td>
</tr>
<tr>
<td>13</td>
<td>Peru</td>
<td>China</td>
<td>14,122</td>
<td>19</td>
<td>25.0%</td>
</tr>
<tr>
<td>14</td>
<td>Venezuela</td>
<td>Hong Kong</td>
<td>13,550</td>
<td>19</td>
<td>8.6%</td>
</tr>
<tr>
<td>15</td>
<td>Chile</td>
<td>Japan</td>
<td>12,814</td>
<td>18</td>
<td>8.5%</td>
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<tr>
<td>16</td>
<td>Brazil</td>
<td>Singapore</td>
<td>12,181</td>
<td>17</td>
<td>15.0%</td>
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<tr>
<td>17</td>
<td>Ecuador</td>
<td>China</td>
<td>11,463</td>
<td>16</td>
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<tr>
<td>18</td>
<td>Argentina</td>
<td>Hong Kong</td>
<td>11,395</td>
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<tr>
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<td>Argentina</td>
<td>India</td>
<td>11,264</td>
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<tr>
<td>20</td>
<td>Brazil</td>
<td>Taiwan</td>
<td>11,120</td>
<td>15</td>
<td>6.8%</td>
</tr>
<tr>
<td></td>
<td>All Other</td>
<td></td>
<td>241,112</td>
<td>330</td>
<td>10.9%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>918,317</strong></td>
<td><strong>1,258</strong></td>
<td><strong>10.1%</strong></td>
</tr>
</tbody>
</table>

Source: MIDT Booking
Data Adjusted for Underreported Traffic
Brazil and Japan are the Leading Countries for South America-Asia Traffic

Share of O&D Passengers by South American Country

- Brazil: 46.6%
- Argentina: 12.8%
- Peru: 10.8%
- Venezuela: 10.3%
- Chile: 6.7%

Share of O&D Passengers by Asian Country

- Japan: 29.7%
- China: 28.2%
- Hong Kong: 9.2%
- S. Korea: 8.2%
- India: 8.0%

Source: MIDT Booking Data Adjusted for Underreported Traffic, YE 2Q 2010
Despite Rapid Growth in Trade Between South America and Asia, the Americas Region Accounted for Just 7.5% of the Value of Air Cargo Exports from LAX During 2010, up From 4.9% in 1999.

LAX Air Cargo Exports, by World Region Destination, by Value ($US Millions) 1999-2010

Source: WISER air cargo database, for years noted.
During this Same Period, the Share of the Volume of Exports Destined for the Americas has Declined from 9.7% in 1999 to 5.3% in 2010.

**LAX Air Cargo Exports, by World Region Destination, by Weight (Millions of Kilograms) 1999-2010**

Source: WISER air cargo database, for years noted.
Falling Volumes and Rising Values Lead to Higher *Unit Values* for Exports from LAX to the Americas

**LAX Air Cargo Exports, by World Region Destination, by Unit Value ($US per Kilogram) 1999-2010**

<table>
<thead>
<tr>
<th>World Region</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
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<tbody>
<tr>
<td>Latin America</td>
<td>$77</td>
<td>$92</td>
<td>$96</td>
<td>$88</td>
<td>$85</td>
<td>$105</td>
<td>$100</td>
<td>$106</td>
<td>$112</td>
<td>$124</td>
<td>$128</td>
<td>$131</td>
</tr>
<tr>
<td>Asia</td>
<td>$151</td>
<td>$148</td>
<td>$133</td>
<td>$124</td>
<td>$134</td>
<td>$123</td>
<td>$138</td>
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<td>Europe</td>
<td>$96</td>
<td>$101</td>
<td>$97</td>
<td>$96</td>
<td>$96</td>
<td>$100</td>
<td>$95</td>
<td>$86</td>
<td>$79</td>
<td>$89</td>
<td>$95</td>
<td>$92</td>
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<tr>
<td>LAX Average</td>
<td>$121</td>
<td>$125</td>
<td>$114</td>
<td>$108</td>
<td>$111</td>
<td>$106</td>
<td>$113</td>
<td>$109</td>
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<td>$104</td>
<td>$88</td>
<td>$90</td>
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<tr>
<td>Canada</td>
<td>$35</td>
<td>$36</td>
<td>$36</td>
<td>$35</td>
<td>$36</td>
<td>$38</td>
<td>$59</td>
<td>$42</td>
<td>$45</td>
<td>$57</td>
<td>$57</td>
<td>$76</td>
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<tr>
<td>Africa</td>
<td>$78</td>
<td>$75</td>
<td>$72</td>
<td>$70</td>
<td>$80</td>
<td>$64</td>
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<td>South Pacific</td>
<td>$96</td>
<td>$105</td>
<td>$105</td>
<td>$96</td>
<td>$81</td>
<td>$66</td>
<td>$78</td>
<td>$76</td>
<td>$74</td>
<td>$73</td>
<td>$67</td>
<td>$65</td>
</tr>
<tr>
<td>Middle East</td>
<td>$102</td>
<td>$111</td>
<td>$91</td>
<td>$70</td>
<td>$65</td>
<td>$66</td>
<td>$78</td>
<td>$39</td>
<td>$37</td>
<td>$38</td>
<td>$30</td>
<td>$50</td>
</tr>
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</table>

**Unit Value ($US/kg)**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<td>$105</td>
<td>$100</td>
<td>$106</td>
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<td>$96</td>
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<td>$66</td>
<td>$78</td>
<td>$76</td>
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<td>$38</td>
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Source: WISER air cargo database, for years noted.
Within the Americas, South America and Mexico/Central America now Account for 95.1% of LAX’s Exports, up from 77.3% in 1999

LAX Air Cargo Exports to the Americas Region, by Value ($US Millions)  
1999-2010

Source: WISER air cargo database, for years noted.
The Same Trend has Occurred in Export Volume, as South America and Mexico/Central America have Seen Their Share Rise from 60.7% to 92.7%
During this same period, Americas-Region Imports at LAX have been marked by growth from Mexico/Central America and decline from South America.

**LAX Air Cargo Exports to the Americas Region, by Weight (Millions of Kilograms) 1999-2010**

Source: WISER air cargo database, for years noted.
Opportunity: The *Unit Value* of Goods Exported from LAX Throughout the Americas Region has Continued to Increase – at the Same Time that Unit Values to Other World Regions Have Declined Consistently

LAX Air Cargo Exports, by World Region Destination, by Unit Value ($US per Kilogram)  
1999-2010

<table>
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<tr>
<th></th>
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<td>$59</td>
<td>$42</td>
<td>$45</td>
<td>$57</td>
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<td>$76</td>
<td>6.6%</td>
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<tr>
<td>Mexico &amp; Central America</td>
<td>$75</td>
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<td>$95</td>
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<td>$111</td>
<td>$127</td>
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<tr>
<td>South America</td>
<td>$81</td>
<td>$105</td>
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<td>$98</td>
<td>$96</td>
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<td>$121</td>
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<tr>
<td>Americas Total</td>
<td>$61</td>
<td>$73</td>
<td>$74</td>
<td>$71</td>
<td>$70</td>
<td>$90</td>
<td>$95</td>
<td>$97</td>
<td>$103</td>
<td>$117</td>
<td>$122</td>
<td>$127</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

Source: WISER air cargo database, for years noted.
Growth Opportunity #2: Preparing now for the Coming Revolution of Additive Manufacturing, Also Known as “3-D Printing”
In Essence, Additive Manufacturing Replaces Traditional *Subtractive* Manufacturing Processes with Layer-by-Layer *Additive* Processes

- **A number of existing technologies allow for 3-D printing of a number of different materials**
  - Laser Sintering (metals)
  - Electron Beam (metals)
    - Melting
    - Direct Manufacturing
  - Aerosol Jetting with Thermal Post-Processing (plastics, resins, wax)
  - Inkjet with UV (plastics, resins, wax)
  - Semi-solid Freeform Fabrication (metallic alloys)

- **Benefits of Additive Manufacturing**
  - Significant reduction of waste of material inputs (e.g., no metal shavings)
  - Improved integrity as fewer parts are needed
  - No need for long-distance transportation of goods (i.e., immediate fulfillment)
  - Customization of manufactured goods (e.g., a shoe designed to fit *my* foot)
  - Lower barriers to entry for entrepreneurs (minimum production runs in the tens, *instead of* thousands)
Many Experts Consider Additive Manufacturing to be the Most Revolutionary Technological Change in the World Economy Since the Personal Computer

- “Indeed, in the future, some see consumers downloading products as they do digital music and printing them out at home, or at a local 3D production centre, having tweaked the designs to their own tastes.”

- How will the Southern California economy (and, more specifically, the transportation/logistics industry, prepare for this coming technological revolution?
The Value of Trade through Southern California Ports
L.A. Customs District
Top Trading Partners
(2009 All Cargo Value)

- **China/HK** $115.81 billion (40% of U.S. Trade)
- **Japan** $32.13 billion
- **S. Korea** $15.77 billion
- **Taiwan** $10.91 billion
- **Thailand** $8.05 billion
- **Australia** $7.12 billion
- **Malaysia** $7.06 billion
- **Singapore** $6.5 billion
- **Vietnam** $5.89 Billion

*China/HK represents 52% of the total*
North American Container Ports

- Los Angeles 7.8 million (2010)
  6.7 million (2009)
- Long Beach 6.3 million (2010)
- New York/N.J 4.59 million *
- Savannah 2.36 million
- Vancouver 2.15 million
- Oakland 2.05 million
- Houston 1.80 million
- Seattle 1.58 million
- Tacoma 1.55 million
- Montreal 1.25 million

* Estimates
Economic Benefits of Trade to Southern California

• Port of Los Angeles State & Local Tax Revenue
  – $ 5.1 billion statewide (California)
  – $21.5 billion nationwide

• Port of Los Angeles Related Employment:
  – 918,800 (1 out of every 8) jobs in Southern California
  – 1.1 million jobs statewide (California)
  – 3.3 million jobs nationwide
  – 84,000 secondary jobs in L.A. area
  – 47,000 direct jobs in L.A. area
The Southern California Gateway

The Right Place for Business

- Population of 21.5 million within a 2 hour truck trip from the Port
- Large business base of over 485,000 companies
- Concentration of manufacturing activity in Southern California with over 930,000 workers
- Excellent port & intermodal rail infrastructure
- 660 million sq.ft. of warehouses within 80 miles

Source: Los Angeles County Economic Development Corp.
The Value of Trade through Southern California

- 43% of all waterborne import trade
- Over $300 Billion in Imports and Exports through the Ports of Los Angeles, Long Beach and Los Angeles World Airports
- Since December 2009, Exports from both Ports have shown strength
- *POLA had a record export year in 2010!*
The National Export Initiative

- The President launched a new program in 2010 to help exports boost the national economic recovery and create jobs.
- The US EXIM Bank has increased its lending for US exports by 50% in its most recent Fiscal Year – highest level in history (1934).
- However, reforms are needed to reduce administrative obstacles faced by exporters.
- Funding is urgently needed for the Department of Commerce Export Assistance Centers.
California [Unrealized]
Export Growth Potential

- 96% of the World’s Consumers Live Outside U.S.
- 66% of the World’s Purchasing Power is Outside U.S.
- 85% of California’s Manufactures do Not Export
- Many Make Exportable Products
- 60% Sell Only to Canada and Mexico (w/in NAFTA)
- Many have New-to-Market Export Potential
Approx. 44% of containerized imports arrive via San Pedro Bay Ports
Emerging Competition

• Panama Canal (2014)
• Suez Canal
• Canada (British Colombia)
• Mexico
  – Manzanillo
  – Lazaro Cardenas
  – Punta Colonet (Baja Nord)
The Panama Canal
British Columbia Ports
Mexican Ports

Lázaro Cárdenas Terminal
the logical trade route connecting the United States and Asia.

Kansas City Railroad delivers goods to Laredo within 36 hours.
How Do We Beat Competition?

• Modernizing our Southern California cargo transportation infrastructure is needed to remain competitive.
• Market ourselves as being efficient & free of congestion.
• Competition from other US regions who are receiving Federal Funds:
  – NS RR Heartland Corridor ($95 Million)
  – NS RR Crescent Corridor ($105 Million)
  – CSX RR National Gateway Corridor ($98 Million)
  – Fort Worth, Texas ($34 Million)
How Do We Beat Competition?

- **Major Rail Projects Needed:**
  - SCIG (BN RR): 2.8 Million TEU’s by 2023
  - ICTF (UP RR): 2.8 Million TEU’s by 2023
  - Alameda Corridor East & Grade Separations

- **Major Highway & Bridge Projects Needed:**
  - Gerald Desmond Bridge Replacement
  - Schuyler Heim Bridge Replacement & SR 47 Expressway
  - I – 710 Truck Corridor
  - East – West Truck Corridor (I – 710 to I – 15)
How Do We Secure Funding to Provide Needed Infrastructure

1. Develop unified package of regional cargo movement projects
2. Achieve consensus on project list and funding priorities
3. Develop coalition to seek funding
The Port of Long Beach

America’s 2nd busiest container port

Combined with LA, comprise the 5th largest complex in the world

Leading gateway for U.S. – Asia trade

$120 billion in trade annually
Economic Epicenter
Economic Impacts

In Long Beach

Support nearly 30,000 jobs (1 in 8 City-wide)

Some $1.9 billion per year spent within LB on port-related services

More than $800 million per year spent within LB on wholesale distribution services
Economic Impacts

In LA County
Support more than 230,000 jobs (1 in 24 County-wide)

Some $3.3 billion per year spent within LAC on port-related services

More than $9.3 billion per year spent within LAC on wholesale distribution services

Move some $5.1 billion in locally manufactured exports
Economic Impacts

**In California**

Support more than 371,000 jobs in CA

Support more than $14.3 billion in wages and salaries

Generate some $5.6 billion per year in State/local tax revenues

More than $10 billion per year spent within California on wholesale distribution services

www.polb.com/100years
Economic Impacts

In the U.S.
Support approximately 1.4 million jobs nationwide

Some $4 billion per year spent nationally on port-related services

Move some $18 billion in U.S. manufactured exports

More than $32 billion per year spent on POLB-related wholesale distribution services
## Top Trade Partners

<table>
<thead>
<tr>
<th>Country</th>
<th>Volume (MTs)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>51.4m</td>
<td>38.8%</td>
</tr>
<tr>
<td>South Korea</td>
<td>15.2m</td>
<td>11.5%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>6.1m</td>
<td>4.6%</td>
</tr>
<tr>
<td>Japan</td>
<td>4.3m</td>
<td>3.3%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>2.8m</td>
<td>2.1%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2.6m</td>
<td>2.0%</td>
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<tr>
<td>Iraq</td>
<td>2.2m</td>
<td>1.7%</td>
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<td>Australia</td>
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<td>Ecuador</td>
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<tr>
<td>Indonesia</td>
<td>1.3m</td>
<td>1.0%</td>
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</table>

Based on CY 2009 data
Top Commodities

**Imports**
- Furniture
- Apparel
- Electronic products
- Toys
- Computer equipment

**Exports**
- Wastepaper
- Scrap metal
- Fabric (including cotton)
- Synthetic resins
- Animal feed
On the Rebound

6.3 million twenty-foot equivalent units in 2010
Container cargo volume up nearly 25 percent over 2009
Why the San Pedro Bay Ports?

Large Consumer Population
Highway System, Rail Connections, Distribution Centers

www.polb.com/100years
Key Rail Connections

60 weekly train departures from Long Beach/San Pedro Bay

www.polb.com/100years
Green Port Policy

Protect the community from negative Port impacts

Distinguish the Port of Long Beach as a global environmental leader

Promote sustainability

Employ best available technologies

Engage and educate the community
Clean Air Action Plan

Adopted groundbreaking Plan in 2006 to reduce air pollution 45% by 2012

CAAP Update adopted in 2010 to further reduce emissions

Strategies for cleaner ships, trucks, trains, tugs, cargo-handling equipment

Technology advancement program
Investing in Infrastructure

$800 million terminal redevelopment, adding deep-water berths, expanded on dock rail
$950 million bridge replacement will ease congestion and improve traffic safety
Regional Transportation Projects

- SR47 Expressway/Heim Bridge ($535 m)
- I-710 EIR ($30 m)
- I-710 Corridor ($5.4 b)
- Colton Crossing ($150 m)
- Alameda Corridor East ($2.5 b)
- Local mainline rail improvements ($3.4 b)
- Various grade separations
- Advance Transportation Management System (ATMIS)
- Zero Emissions Container Mover System
Remaining Competitive

- **Invest in critical infrastructure projects**
- **Develop a National Freight Policy with funds dedicated to goods movement projects (e.g. funding by formula)**
- **Support the National Export Initiative and other measures that will increase exports and create jobs**
THANK YOU