Strategic Trends in Air Cargo

Regional Symposium in Brazil

This two-day symposium is a comprehensive event with both informational and practical components for executives in civil aviation administrations, airlines, logistics companies, aviation training centres and for industry experts and support personnel with an interest in the trends and strategies for the air cargo market. The event will be conducted in English, Spanish and Portuguese with interpretation/translation as appropriate.

The Air Cargo – Some Fundamentals

Vladimir D. Zubkov
• Vice-President, Volga-Dnepr Group
• Board Member of TIACA
Volga-Dnepr Group – some facts

190 - Countries
1180 - Airports around the world
Loading/Unloading System for up to 80 Tons Heavy Cargo

Moscow – Le Bourget. Angara Space Launcher
Under Own Power Loading System

Construction engineering
Value of Air Cargo

- The Value to modern life – Consumers
- The Value to economic prosperity – Governments / Regulators
- The Value to the global community – everyone
- The Value to Airline CEOs
The air cargo industry came up with a campaign: “Air Cargo Makes it Happen”
The Value to modern life

- Daily Impact if Air Cargo didn’t exist
  - Food
  - Clothes
  - Entertainment
  - Technology
  - Leisure
  - ....
Travelling first class in a stable market

...air cargo makes it happen.

The world's most valuable horses are now competing in parts of the world where this would have been unimaginable 20 years ago.

www.iata.org
16-18 March: Australia

23-25 March: Malaysia

...air cargo makes it happen.
By flying 60 cars and 300 tonnes of equipment to 20 grand prix, in 19 countries, with 500 million avid viewing fans, air cargo keeps Formula 1 on track.

www.iata.org
The Value to the Global Community

- First responder in getting relief to natural disaster sites
- Safe and controlled transport of medicines
- Vaccines .... etc
Help from the sky

...air cargo makes it happen.

Air cargo plays an essential role in assistance to regions facing natural disasters, famine and war by delivering aid and emergency supplies where they are needed as soon as they are needed.

www.iata.org
A life protected

...air cargo makes it happen.

Immunization prevents 2.5 million deaths every year. Air cargo is critical in flying vaccines to their destination in time to be effective.

www.iata.org
Air cargo was always considered as a barometer of the global economy.
However, in the recent years air cargo is on decline

But world trade in goods has been expanding
Since 2010Q2 world trade has risen 10%; air FTKs have fallen 7%

FTKs flown by air and overall world trade volumes

Almost 3 years of a shrinking air cargo share in world trade
Where the economic growth is coming from

Share of world GDP growth 2008-2011

- China, 35%
- India, 12%
- Latin America, 9%
- US, 9%
- MENA, 6%
- Euro-zone, 4%
- CE Europe, 3%
- SS Africa, 3%

Source: Haver
All is Interconnected: iPhone Manufacturing & Distribution Process Demonstrates Importance of Good Logistics and the Utility of Air Cargo to World Economies

iPhone Components & Source Countries

- LCD Display
- Flash Memory Chip
- Applications Processor
- DRAM Memory
- Bluetooth, GPS Chips
- Radio Frequency Memory
- Touch Screen Control, Wi-Fi
- Receiver/Transceiver
- Power Management
- Accelerator/Gyroscope
- Compass

**iPhones are available in all blue countries**

The importance of air cargo …

Chart 3.9: Proportion of global trade transported by air

USD 6.4 Trillion

Source: The Colography Group\textsuperscript{19}, Oxford Economics
Have you got one of these with you?

...air cargo makes it happen.
Air cargo transports over US$ 5 trillion in goods, including the latest phone, game and multimedia gadgets — bringing your world to life.

www.iata.org
Delivering time on time

...air cargo makes it happen.

The Swiss watch industry continues to record strong growth. Reliable air cargo is keeping this industry ticking by connecting the Swiss made timepieces with the world

www.iata.org
From his field to your vase

...air cargo makes it happen.

Air cargo flies over 90,000 tonnes of Kenyan flowers each year, sustaining 60,000 jobs. So when you say it with flowers, remember they've come further than you think.

www.iata.org
The Value to Airline CEOS

- Air Cargo makes DOLLARS and SENSE

- Quality, Premium Service, Vital....
The importance of air cargo...

23. Global Airline Industry Cargo Revenues

Source: ICAO, IATA

- Cargo Revenues
- % Growth
The importance of air cargo …

- 14% Business Class
- 12% Cargo
- 70% Economy Class

Industry Revenue contribution

*Source: PetS/Cargos based on $535 billion industry revenue generation*
Air Cargo Traffic Is Forecasted To Outpace Passenger Traffic Growth in Most Major World Markets

<table>
<thead>
<tr>
<th>Region</th>
<th>Average Annual Traffic Growth Rate 2011 - 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td></td>
</tr>
<tr>
<td>Cargo</td>
<td>5.6%</td>
</tr>
<tr>
<td>Passenger</td>
<td>5.1%</td>
</tr>
<tr>
<td>North America</td>
<td>5.1%</td>
</tr>
<tr>
<td>Intra North America</td>
<td>2.3%</td>
</tr>
<tr>
<td>Europe - North America</td>
<td>3.8%</td>
</tr>
<tr>
<td>Europe</td>
<td>4.0%</td>
</tr>
<tr>
<td>Intra Europe</td>
<td>3.1%</td>
</tr>
<tr>
<td>Intra Asia</td>
<td>6.2%</td>
</tr>
<tr>
<td>Intra Asia</td>
<td>5.9%</td>
</tr>
<tr>
<td>Europe - Asia</td>
<td>4.9%</td>
</tr>
<tr>
<td>Europe - Africa</td>
<td>4.6%</td>
</tr>
<tr>
<td>Intra Asia</td>
<td>7.4%</td>
</tr>
<tr>
<td>North America - Latin America</td>
<td>5.4%</td>
</tr>
<tr>
<td>Latin America</td>
<td>5.2%</td>
</tr>
<tr>
<td>North America - Latin America</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

Average Annual Traffic Growth Rate
2011 - 2030
Freighter Fleet will Nearly Double with a Shift Toward Larger Freighters

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard-body (&lt;=45 tonnes)</td>
<td>35%</td>
<td>39%</td>
</tr>
<tr>
<td>Medium widebody (40-80 tonnes)</td>
<td>35%</td>
<td>26%</td>
</tr>
<tr>
<td>Large (&gt;80 tonnes)</td>
<td>30%</td>
<td>35%</td>
</tr>
</tbody>
</table>

2010: 1,760 freighters
2030: 3,500 freighters

- Large (≥80 tonnes): MD-11, 747, 777, A350, A380, AN-124, IL-96, etc.
- Medium widebody (40-80 tonnes): DC-10, A300, A310, A330, A340, 767, 787, etc.
- Standard-body (<45 tonnes): DC-8, DC-9, Tu-204, A320, 727, 737, 757, etc.
15. Twin Aisle Aircraft Deliveries by Airline Region

Source: Ascend
But key customers are reducing shipments

Semi-Conductor Shipments and Air Freight
Source: IATA, SIA

International FTKs
Semi-Conductor Shipments

% growth - International FTKs
% growth, Semi-Conductor Shipments

However, as stated before – the air cargo is on decline.

But world trade in goods has been expanding.
Since 2010Q2 world trade has risen 10%; air FTKs have fallen 7%.

FTKs flown by air and overall world trade volumes.

Almost 3 years of a shrinking air cargo share in world trade.
Cargo and passenger markets have diverged.

Total Air Freight and Passenger Volumes
Seasonally Adjusted

- Monthly RPK (Billions)
- Monthly FTK (Billions)

2007 2008 2009 2010 2011 2012
14. Freight load factor and freighter aircraft utilization

Source: Boeing, IATA
(Seasonally Adjusted)

- Freight Load Factor
- Freight aircraft utilization
Forces and Constraints for Air Cargo Growth

- Trade quotas and restrictions
- Currency revaluations
- Air and surface labor stoppages
- "Open Skies" and new air services agreements
- New trade relationships
- Express market
- "Just in time" concepts
- National development programs
- Airline market research
- Export promotion
- Proliferation of points served
- New commodities
- Widebody freighters, and lower holds
- Airline market and shipper education
- Shipper utilization
- World and regional GDP growth
- Directional imbalances
- Oil/fuel prices and availability
- Terrorism/armed conflict
- Lack of airport access
- Environmental regulations
- Deregulation
- Air and surface labor stoppages
- New commodities
- "Just in time" concepts
- National development programs
- Airline relocation
- Directional imbalances
AstraZeneca is shifting transport of pharma products from air to sea, with the objective by end of last year to have moved 40% to sea transport and by end of 2013 70%.

Ericsson: better production planning will support strategic shift away from Air Cargo

Sony Corp.: CSR (Modal shift) nearly 30% of total VAIO® notebook computers
Modal shift from air to sea (freight)

Source: Davy; Transport Intelligence Survey
The industry must reshape

- Solutions must align with customer demands
  - Costs must be reduced
  - Processes must be simplified
  - Technology must be embraced
  - Innovation must replace status quo
  - We must collaborate to produce integrated solutions
  - Relationships with Forwarders must be redefined
The air supply chain

Complex interfaces...
E-freight:

- Shippers
  - Origin Freight Forwarders
  - Export Customs
  - Removing Documents by Scanning. 26% volume
  - Removing Documents by Electronic Messages. 10% by volume

- Origin-Destination Airports
  - Origin Freight Forwarders
  - Import Customs
  - Removing Documents by Electronic Messages. 34% by volume
  - Removing Documents by Electronic Messages. 30% by volume

- Destination Freight Forwarders
  - Consignees
The GACAG* vision for 2015

1 – Global e-freight Network

2 – Digitization Core Transport Docs

3 – Digitization Commercial Docs

100% e-AWB, e-House Manifest & e-Flight Manifest capability on e-freight trade lanes

80% world trade lanes allow paperless air cargo transport

Use of e-pouch for large set of cargo shipments

Lead

2015 Goal

IATA (GACAG support)

IATA (FIATA support)

FIATA & GSF

* GACAG - the Global Air Cargo Advisory Group, which comprises four global industry associations – IATA, FIATA, TIACA, and the Global Shipper’s Forum
Acceleration of new consumer paradigm

Cyber Monday Online SalesSource: comScore, Inc.

<table>
<thead>
<tr>
<th>Day</th>
<th>Year</th>
<th>Sales (millions of US$)</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 27</td>
<td>2006</td>
<td>$610</td>
<td>N/A</td>
</tr>
<tr>
<td>November 26</td>
<td>2007</td>
<td>$730</td>
<td>20%</td>
</tr>
<tr>
<td>December 1</td>
<td>2008</td>
<td>$846</td>
<td>16%</td>
</tr>
<tr>
<td>November 30</td>
<td>2009</td>
<td>$887</td>
<td>5%</td>
</tr>
<tr>
<td>November 29</td>
<td>2010</td>
<td>$1,028</td>
<td>16%</td>
</tr>
<tr>
<td>November 28</td>
<td>2011</td>
<td>$1,251</td>
<td>22%</td>
</tr>
</tbody>
</table>
A vision for a modern industry (1/3)

- Strengthening industry relationships
  - Modernize IATA Agency model: partnership based, aligned with airline / forwarder evolution

- Reacting to business model evolution
  - Respond to changing consumer patterns…collaboration with supply chain partners a must to address “click-buy-fly” home-to-home or factory-to-home trends.
  - Value price, service revaluation…bespoke supply chain solutions
• Maintaining high level safety & security

• Re-engineering ground processes
  – Acceleration of transportation process. Collaboration with supply chain partners a must to address “shipper to aircraft” process.

• Ensuring technology is fully embraced
  – Data exchange rather than message exchange
Collaborating for a sustainable industry

- Accelerate “Value of Air Cargo” campaign - shout not whisper air cargo’s role in today’s world
- Target young and entrepreneurs to embrace “logistics” as a career choice
- Focus on training must increase... hard and soft skills
- Work on environmental issues: ability to calculate our carbon footprint, best practices to be greener
Security: protecting the skies

- ACC3
- ACAS
- New ICAO guidance material
- RA / KC programs
- +++
Fighting the Green battle

- MISINFORMATION:
  - Air Cargo accounts for 2% of global CO2 emissions
  - Port to Port reporting is sufficient
  - Airlines are doing nothing
Air Cargo – Vital for today’s society and economy