Aviation Global Landscape
Asia Pacific Perspective

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Association of Asia Pacific Airlines
Aviation: delivering global mobility

- Safely connecting people and business
- Wider social and economic benefits
- Outstanding safety record
- Committed to sustainable growth

Source: ICAO Preliminary Traffic Report, ATAG Benefits Beyond Borders
Aviation safety performance

Western-built Jet Aircraft Major Accident Rates by Operator Region 2007-2017
3-year moving averages

Striving for continuous improvement

Source: AAPA

Major accident Rates (million sectors)

- 1 major accident in 5 million flights
- 1 major accident in 4 million flights
- 1 major accident in 3 million flights
- 1 major accident in 2 million flights

World
ASPAC

AAPA
ASSOCIATION OF ASIA PACIFIC AIRLINES
Asia Pacific

- Diverse geographic region
- Home to more than 4 billion people
- Dynamic economies generate 35% of global GDP
- Aviation widely recognised as a key contributor to economic and social development
  - Supports 29 million jobs and US$626 billion in GDP
- Wide range of income levels, rapidly growing middle class

Source: IMF, ATAG Benefits Beyond Borders
Asia Pacific Aviation

US$185 billion revenue
US$9 billion net profit
1,486 million passengers
1,055 million domestic
431 million international
22 million tonnes of cargo
7,997 aircraft

Asia Pacific carriers overall market share:
34% of global passenger traffic
36% of global cargo traffic

Combined AAPA + non-AAPA airlines GMT+5 to GMT+12
## World’s ten busiest domestic routes

<table>
<thead>
<tr>
<th>Rank</th>
<th>Route</th>
<th>PAX (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jeju – Seoul</td>
<td>13.5</td>
</tr>
<tr>
<td>2</td>
<td>Melbourne – Sydney</td>
<td>7.8</td>
</tr>
<tr>
<td>3</td>
<td>Fukuoka – Tokyo</td>
<td>7.6</td>
</tr>
<tr>
<td>4</td>
<td>Sapporo – Tokyo</td>
<td>7.4</td>
</tr>
<tr>
<td>5</td>
<td>Beijing – Shanghai</td>
<td>6.4</td>
</tr>
<tr>
<td>6</td>
<td>Hanoi – Ho Chi Minh City</td>
<td>6.4</td>
</tr>
<tr>
<td>7</td>
<td>Delhi – Mumbai</td>
<td>5.6</td>
</tr>
<tr>
<td>8</td>
<td>Tokyo – Okinawa</td>
<td>4.8</td>
</tr>
<tr>
<td>9</td>
<td>Jeddah – Riyadh</td>
<td>4.8</td>
</tr>
<tr>
<td>10</td>
<td>Beijing - Chengdu</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Mostly in Asia Pacific

Source: IATA WATS 2018, 2017 data
## World’s ten busiest international/regional routes

<table>
<thead>
<tr>
<th>Rank</th>
<th>Route</th>
<th>PAX (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hong Kong - Taipei</td>
<td>5.4</td>
</tr>
<tr>
<td>2</td>
<td>Dublin – London</td>
<td>3.4</td>
</tr>
<tr>
<td>3</td>
<td>Jakarta – Singapore</td>
<td>3.3</td>
</tr>
<tr>
<td>4</td>
<td>Bangkok – Hong Kong</td>
<td>3.1</td>
</tr>
<tr>
<td>5</td>
<td>Kuala Lumpur – Singapore</td>
<td>2.8</td>
</tr>
<tr>
<td>6</td>
<td>Hong Kong – Seoul</td>
<td>2.7</td>
</tr>
<tr>
<td>7</td>
<td>London – New York</td>
<td>2.7</td>
</tr>
<tr>
<td>8</td>
<td>Osaka – Taipei</td>
<td>2.6</td>
</tr>
<tr>
<td>9</td>
<td>Bangkok – Singapore</td>
<td>2.5</td>
</tr>
<tr>
<td>10</td>
<td>Tokyo – Taipei</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: IATA WATS 2018, 2017 data

**Mostly in Asia Pacific**
Aviation: network density & affordability

Source: IATA
Business Outlook
Global economic trends

World GDP Growth

Prospects remain positive, but some downside risks

Source: IMF
Global passenger and cargo traffic

Strong passenger growth
Trend rate +6.6% p.a.

Air cargo market recovery
Trend rate +4.7% p.a.
Oil prices rising

First half of 2018 saw a 37% increase in jet fuel prices to average US$84 per barrel

Source: US Energy Information Administration
Airfares follow changes in oil prices

Airfares remain highly competitive, margins under pressure

Source: IATA
Global airline profitability trends

- Strong passenger and air cargo markets
- Average profit margin just 4% or US$8 per passenger

Source: IATA
Airline enterprise values by region

Market capitalisation as of 10 August 2018

Source: AAPA Estimates

North America
- Delta
- American
- Southwest
- United
- Alaska

Europe
- Ryanair
- IAG
- Lufthansa
- Air France-KLM
- EasyJet

Asia Pacific
- Air China
- China Eastern
- China Southern
- All Nippon Airways
- Cathay Pacific
- Japan Airlines
- Hainan
- Qantas Airways
- Singapore Airlines

US$ million

Market Capitalisation

Long Term Debt
Regulatory Challenges
Global regulatory challenges

Aviation is subject to intensive regulation

- Safety
- Security
- Sustainability
- Passenger Facilitation
- Consumer Protection
- Competition Laws
- Taxes & Charges
Global regulatory influences

- Wider impact of US and EU regulations
- Asia Pacific needs a unified voice
- Need for harmonised global standards
Regulatory framework & competition

- Barriers to cross-border consolidation
- Cooperation, codeshares, joint ventures
- Emergence of complex group holding structures
- Trade protectionist sentiments may impede liberalisation efforts
- Varying interpretations of ownership & control restrictions, subsidies, fair competition

*Global regulatory framework must keep pace with evolving market dynamics*
Future Growth
Aspirational demand for air travel

2017-2037 trips per capita (each bubble is a country)

Source: Airbus GMF 2018-2037
Growing middle class consumers

Rising demand for goods & services including air travel

Source: Oxford Analytics, Airbus
Households with yearly income between $20,000 and $150,000 at PPP in constant 2017 prices
Asian markets leading future growth

*Does not include travel within China

Source: Boeing CMO 2018-2037
Future orders led by Asian airlines

New airplane deliveries by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Airplanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>16,930</td>
</tr>
<tr>
<td>North America</td>
<td>8,800</td>
</tr>
<tr>
<td>Europe</td>
<td>8,490</td>
</tr>
<tr>
<td>Middle East</td>
<td>2,990</td>
</tr>
<tr>
<td>Latin America</td>
<td>3,040</td>
</tr>
<tr>
<td>Russia &amp; Central Asia</td>
<td>1,290</td>
</tr>
<tr>
<td>Africa</td>
<td>1,190</td>
</tr>
<tr>
<td>World Total</td>
<td>42,700</td>
</tr>
</tbody>
</table>

- **Asia Pacific** to account for 40% of new aircraft deliveries
- **Infrastructure & manpower requirements**

Source: Boeing CMO 2018-2037
Infrastructure

- Airports and airspace modernisation must keep pace with rapid traffic growth to avoid congestion and delays
- Significant capital investment required
- Slots management is an alleviation, not a solution
- Governments need to think beyond national borders & develop regional air traffic flow management systems
- Strengthen cyber security & resilience

Government role to coordinate infrastructure planning and investment
Aviation & sustainable development

• Aviation pursuing multi-pillar strategy:
  - Fuel efficiency through technology
  - Operational enhancements
  - Infrastructure improvements
  - Sustainable alternative fuels
  - Supplementary carbon offsets through ICAO CORSIA

• Aviation is the first industry sector to implement a global market based measure
  - ICAO CORSIA technical guidelines - 2018
  - Airline international emissions reporting - 2019
  - ICAO CORSIA carbon offsetting obligations - 2020 onwards

Aviation has set ambitious targets and is delivering on its commitments
Airline Strategies
Evolving airline business strategies

- Business models continue to evolve, adapting to a dynamic marketplace
- Differentiated classes of service
- Unbundling ancillary services at a price
- Group structures & multiple brands
- Revenue optimisation through network connectivity & cooperative relationships

Asia Pacific airlines at the forefront of global industry developments
Business models share by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Full Service</th>
<th>Low Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>Europe</td>
<td>63%</td>
<td>26%</td>
</tr>
<tr>
<td>North America</td>
<td>75%</td>
<td>24%</td>
</tr>
<tr>
<td>Middle East</td>
<td>94%</td>
<td>6%</td>
</tr>
<tr>
<td>Latin America</td>
<td>72%</td>
<td>28%</td>
</tr>
<tr>
<td>Africa</td>
<td>91%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Global:
- Market Share: 76% Full Service, 21% Low Cost
- Growth: +6.5% Full Service, +13.6% Low Cost

Source: IATA WATS 2018, 2017 data
Closing thoughts

• Aviation is driving global economic and social development

• Future infrastructure planning is a key challenge

• Airline strategies adapting to changes in market demand and consumer preferences

• Competing travel distribution & merchandising platforms

Asia Pacific airlines are shaping the future of global aviation
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