Introduction to airline network planning:

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What types of airline exist?

- Global network carriers
  - Long haul services
  - Short haul services
- Regional / niche
- Charter
- Low cost
What types of airline exist?

- Global network carriers
- Long haul services
  - Usually 2 or 3 cabin service
  - Profitability driven by low unit costs
  - Point to point and connecting traffic
What types of airline exist?

- Global network carriers
- Short haul services
  - Usually 1 or 2 cabin service
  - Low utilisation
  - Dis benefits of feeder traffic
  - Conflict of feeder versus point to point
What types of airline exist?

- Regional / niche carriers
  - Small planes, 15 to 70 seats
  - Turbo props and regional jet equipment
  - Small niche markets (e.g. UK regional)
  - Convenience role
  - Business focus-not low price
What types of airline exist?

- Regional/niche carriers: other potential roles:
  - Public service role (PSO)/community service (subsidised) e.g. Scottish Islands
  - Feeder role to main carriers
    - Prorate
    - Fixed price capacity provision
    - Franchise
What types of airline exist?

- Charter carriers
  - Frequently vertically integrated (e.g., Thomsonfly, First Choice)
  - Tour operator relationship
  - Some, or all capacity, sold in this way
  - Increasing move to seat only
    - Frequently less flexibility for customers than scheduled service
    - Moving more and more into long haul markets
What types of airline exist?

- LCC’s
- Simplicity
  - Point to point networks, no interlining
  - Simple product, no multi cabin service
  - Simple pricing; no complex fare rules and conditions
  - Simple sales (distribution) and marketing
What types of airline exist?

- LCC’s
- Cost avoidance
  - Aircraft and crew
    - More flights per aircraft-fast turnarounds,
    - Modern efficient fleet
    - Higher seat capacity
    - High crew efficiency- more flights, no night stops, cleaning
What types of airline exist?

- LCC’s
- Cost avoidance
  - Airport Selection
    - Frequent use of secondary or regional airports
    - Facilitates rapid turn around and punctuality
    - Ability to offer simplified service
    - Significantly reduce cost base
Data

‘Traditional’ sources of data
- CAA (UK Civil Aviation Authority or equivalent regulatory body)
- MIDT, GDS data
- QSI analysis
- Fare information
- Competition
Data

- CAA traffic data
  - Shows the history of passengers travelling on a route (not necessarily from A to B as passengers may be in transit)
  - Therefore not true O and D (Origin and destination)
  - CAA passenger survey provides true O and D but subject to some caveats
    - Sample error
    - Not reliable for new markets, particularly low cost
Data

- MIDT (marketing information data)
  - provides true O and D
  - Can provide useful breakdown by booking class (cabin) to show mix
    - Expensive
    - Can be limited to certain systems
    - Bookings through GDS reducing
Data

- QSI can take account of
  - Capacity share on a route
  - Frequency share
  - Elapsed time
  - Possible weighting for equipment type, e.g. jet versus turbo prop

- Indicative, not guaranteed accuracy
Data

- Fare information
  - Research carriers websites
  - By fare type / cabin, time period
- Selective use of MIDT by cabin
Data

- Competitor information
  - Examine carriers schedules
  - Frequency
  - Capacity/ equipment
  - Service concept
Network planning

**Process**
- Traffic volume forecasts produced
- Revenue estimates (average yield x volume) using market fare data and comparative route experience
- Route costings prepared
- Results scenario produced
  - Projected profit or loss
Scheduling Trade offs

- Numerous factors including:
  - Equipment and operational considerations
  - Traffic mix
  - Competition
  - Seasonality
  - Slots/ Utilisation
Equipment / Operational

- Operational constraints?
  - Runway length
  - Special procedures for arrival / dep dictating limitations and / or special training?
  - Equipment type?
Different markets suit different equipment size
  – Some driven by high volume
  – Others by frequency

For example, a Boeing 747 needs very high volumes, therefore strong market and/or availability of transfer traffic.
Equipment / Operational

* 747, A340 are classic large capacity long haul types
  - B777 offers better cost economics almost similar capacity
  - Smaller capacity: 767/A330, even 757 more suited to smaller, niche markets

* Not only capacity:
  - cost and range considerations
Equipment / Operational

- Short haul
  - Low cost, typically relies on high volumes, low ticket price
  - Needs low unit seat cost and reliable equipment: Boeing 737 and Airbus A320 family
  - Smaller regional markets may be suited to new generation regional jets with 70-120 seats
Equipment / Operational

- Short haul
  - Other markets may be better suited to new generation turbo props
  - Operational conditions, market size, cost economics
  - Typically markets which are able to sustain higher average yields
Traffic Mix

- Business / leisure
  - Point to point, transfer
- Legacy carriers in particular looking for good business traffic
- Not simply by definition of travel but by fare type/ cabin that passenger prepared to pay for
Traffic Mix

- Short haul, increasingly difficult to find such markets
  - Need niche market and/or limited competition
  - Ability to promote frequency as an advantage versus fare price premium and flexibility
Traffic Mix

- Long haul, some routes can be profitable on strength of business traffic alone
  - Much greater ability to differentiate product in terms of space, service and comfort
  - Addition of 4th cabin, premium economy to trade up some business travellers who remain price sensitive
Traffic Mix

- Demonstrable business traffic is very important in selection decision
  - Can support a route
  - Can subsidise economy cabin where price competition puts pressure on yields
Traffic Mix

● Business travel characteristics
  – ‘Has to go’
  – Inelastic / less sensitive to price
  – Flexibility
  – Choice
  – Convenience
  – Cyclical according to economy
  – Potentially higher margin, profitability
Traffic Mix

- Leisure travel characteristics
  - ‘Choice to go’ (discretionary)
  - Highly elastic / very sensitive to price
  - More likely to move flight, carrier, airport, according to price
  - Many sub segments:
    - Holiday
    - Friends and family
    - Ethnic community
Traffic Mix

• Leisure travel
  – Usually subject to significant seasonality
  – Although price is a prime motivator, market may sustain higher fare levels in conditions of limited competition or at certain peak periods
Traffic Mix

● Economy traffic
  – Short haul increasingly price sensitive
  – More difficult to generate true profitability for legacy carriers

● Long haul: profitability depends on volume
  – Large cabins produce low marginal seat costs so high occupancy
# Traffic Mix: fare examples

<table>
<thead>
<tr>
<th>Class</th>
<th>Flexible</th>
<th>Restricted</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>£3,350</td>
<td></td>
</tr>
<tr>
<td>Business Class</td>
<td>£2,192</td>
<td>£1,346</td>
</tr>
<tr>
<td>Premium Economy</td>
<td>£756</td>
<td>£320</td>
</tr>
<tr>
<td>Economy</td>
<td>£440</td>
<td>£150</td>
</tr>
<tr>
<td>Promotional</td>
<td></td>
<td>£100 (£199 return)</td>
</tr>
</tbody>
</table>

British Airways pricing London-New York
Travel March, selected mid February (based on 1 way)
Traffic Mix: fare examples

- 1 First Class = 22 restricted economy class!
- 1 Business Class = 15 restricted economy class!
- 12 F Class = £40,000
- 300 Economy class = £45,000
### Traffic Mix: fare examples

#### British Airways pricing London-Frankfurt
**Travel March, selected mid February**

<table>
<thead>
<tr>
<th>Class</th>
<th>Flexible</th>
<th>Restricted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Class</td>
<td>£326</td>
<td>£146</td>
</tr>
<tr>
<td>Economy</td>
<td>£297</td>
<td>£46</td>
</tr>
</tbody>
</table>

#### Ryanair pricing Stansted-Hahn
**Travel Feb-Mar, selected mid February**

<table>
<thead>
<tr>
<th>Date</th>
<th>Out</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>14/15 Feb</td>
<td>£19.99</td>
<td>£45/£70/£85/£100</td>
</tr>
<tr>
<td>21/22 Feb</td>
<td>£0.39</td>
<td>£0.39/£9.99/£19.99</td>
</tr>
<tr>
<td>14/15 Mar</td>
<td></td>
<td>£0.39</td>
</tr>
</tbody>
</table>
Traffic Mix: fare examples

- 1 Club class = 7 Economy promotional seats!
- 100 Club class = £32600
- 100 Economy promotional = £4600
# Traffic Mix: fare examples

**Ryanair pricing Stansted-Murcia**  
**Travel Feb, Mar, June selected mid February**

<table>
<thead>
<tr>
<th></th>
<th>14/15 Feb</th>
<th>14/15 Mar</th>
<th>14/15 Mar</th>
</tr>
</thead>
</table>
Traffic Mix

- Point to point versus Transfer
  - Higher ratio of point to point is preferable
  - Some carriers and markets live on transfer traffic (e.g. KLM at AMS)
  - AF/KL/LH have higher ratios of transfer than BA: around 60% versus 30%
Traffic Mix

• Point to point versus Transfer
  – short haul flights with majority transfer traffic, likely to mean services are loss making in their own right
Traffic Mix

- How to evaluate business market
  - CAA, MIDT: weaknesses described
- Direct contact with business community
  - Data on companies owned by/linked to key markets
  - Survey of travel usage (by cabin, fare), volume, frequency, travel policy
Competitive Environment

- Direct and indirect competition?
  - Other neighbouring airport options?
  - Surface alternatives for short haul?
- How many carriers flying?
  - What level of frequency / capacity?
  - Reputation, quality
  - Available data on traffic volumes/load factors/pricing?
Seasonality

- Need to keep aircraft busy all year
  - Therefore need year round markets and/or complimentary markets for summer/winter
  - Need to appreciate seasonal differences in traffic mix (e.g. less business traffic in summer and more in autumn)
Seasonality

How to find complimentary routes which balance out seasonal factors…

- Examples?

- E.G. USA-Europe summer, USA/Canada Caribbean in winter

- Short haul: Mediterranean summer, Ski winter
Other Trade Offs

- **Slots**
  - Severe constraint on network planning at many of the world's busiest airports

- **Maintenance**
  - How to minimise down time
  - How to plan aircraft out in order to reduce impact on commercial opportunities
Network planning-Low Cost approach

- Low Cost Approach-Existing markets
  - How does it differ?
  - Is traditional market data useful?
Network planning-Low Cost approach

- Existing markets
  - Under served and over priced markets
  - Examine available statistics on route trends; market growth, changes in competition, pricing
  - Estimate market share and potential stimulation
  - Negotiate cost reduction taking into account reduced requirements of low cost carriers and ability to generate new traffic
Network planning—Low Cost approach

- The importance of price stimulation
  - New travel
  - Increased frequency of travel
  - Examples:
One of the early examples of market stimulation
- Largest share of growth taken by low cost
- Growth for traditional carriers but at the expense of yield and mix of traffic (point to point versus interline)
- Changes in capacity provision by traditional carriers occurred over the period
- Significant slowing in recent years
- Data source: CAA
Network planning-stimulation

- Early low cost secondary airport market from London
- Strong traffic growth from a zero base
- New UK points and Dublin added with similar success for LCC’s
- LGW and MAN started summer 2007
- LBA and EDI from 2008
Network planning-Low Cost approach

- Non-conventional approach, New markets
  - How can low cost carriers and airports assess potential for completely new markets?
  - Does conventional data help?
  - What role does price / cost relationship play?
  - What are the guides to good market potential?
Network planning-Low Cost approach

- Non-conventional approach, New markets
  - Qualitative understanding of market potential is more important than conventional route planning methodologies
  - Price alone can be a driver of new market…
  - …but it is not sufficient alone to provide evidence of success or sustainability:
  - So what type of qualitative information is needed?
Network planning-Low Cost approach

What factors are important for new market development?
Network planning-Low Cost approach

● Indicators of why people might travel….or travel more?
  – Popular leisure destination?
    ● What tourism data is available?
    ● What are the tourism attractions?
    ● How are people travelling now – costs and time of other options
  – Second home ownership?
    ● Encourages real market generation, repeat business and less price sensitive
    ● Where abouts are people buying?
Network planning-Low Cost approach

- Indicators of why people might travel….or travel more?
  - Ethnic population links?
    - Encourages more regular travel, price a key factor
    - Substitution from other means of transport
    - What size and dispersion of community exists within the airport catchment?
Network planning-Low Cost approach

- Indicators of why people might travel….or travel more?
  - Business travel motives?
    - Key local businesses, industries which would generate regular journeys
  - Good alternative to existing primary airport?
Network planning-Low Cost approach

Indicators of why people might travel….or travel more?

- Nationality driver-outbound or inbound?
  - Which end of the route will be the driver…or both?
- Ability to connect to/from other flights at other end of route?
- Opportunistic, price driven…
Network planning-Conclusions

- Essential to the financial success of an airline regardless of type, however...
  - Different methods according to circumstance
  - Not an exact science
  - Dynamic response needed to volatile market conditions
  - Needs to marry ideal commercial objectives with operational feasibility and external constraints
  - The art of the possible: making the best of the real world
Thank you!

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