

AIR TRANSPORT MANAGEMENT

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Introduction to airline network planning:

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 - Generic / traditional
 - Low cost

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 / departure dictating limitations and / or special training?
 - Equipment type?

Equipment / Operational

- Different markets suit different equipment size
 - Some driven by high volume
 - Others by frequency
- For example, a Boeing 747 needs v 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

British Airways pricing London-New York Travel March, selected mid February (based on 1 way)		
	Flexible	Restricted
First	£3,350	
Business Class	£2,192	£1,346
Premium Economy	£756	£320
Economy	£440	£150
Promotional		£100 (£199 return)

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

	Flexible	Restricted
Business Class	£326	£146
Economy	£297	£46

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

	14/15 Feb	21/22Feb	14/15Mar
Out	£19.99	£0.39	£0.39
Back	£45/£70/£85/£100	£0.39/£9.99/£19.99	£0.39

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			
	14/15 Feb	14/15 Mar	14/15Mar
Out	£69.99/ £34/99	£14.99	£39.99
Back	£119.99/£89.99	£2.39/£14.99	£39.99

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

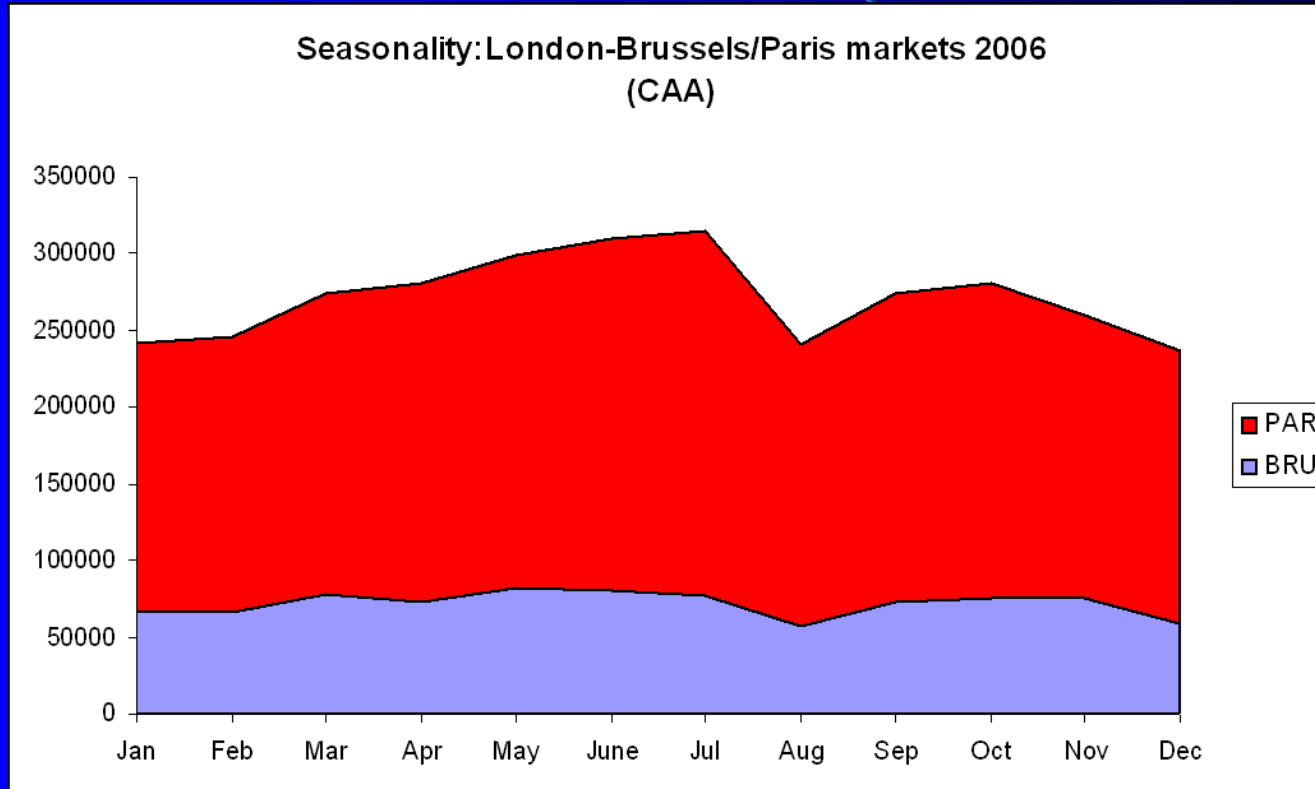
Competitive Environment

- 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?

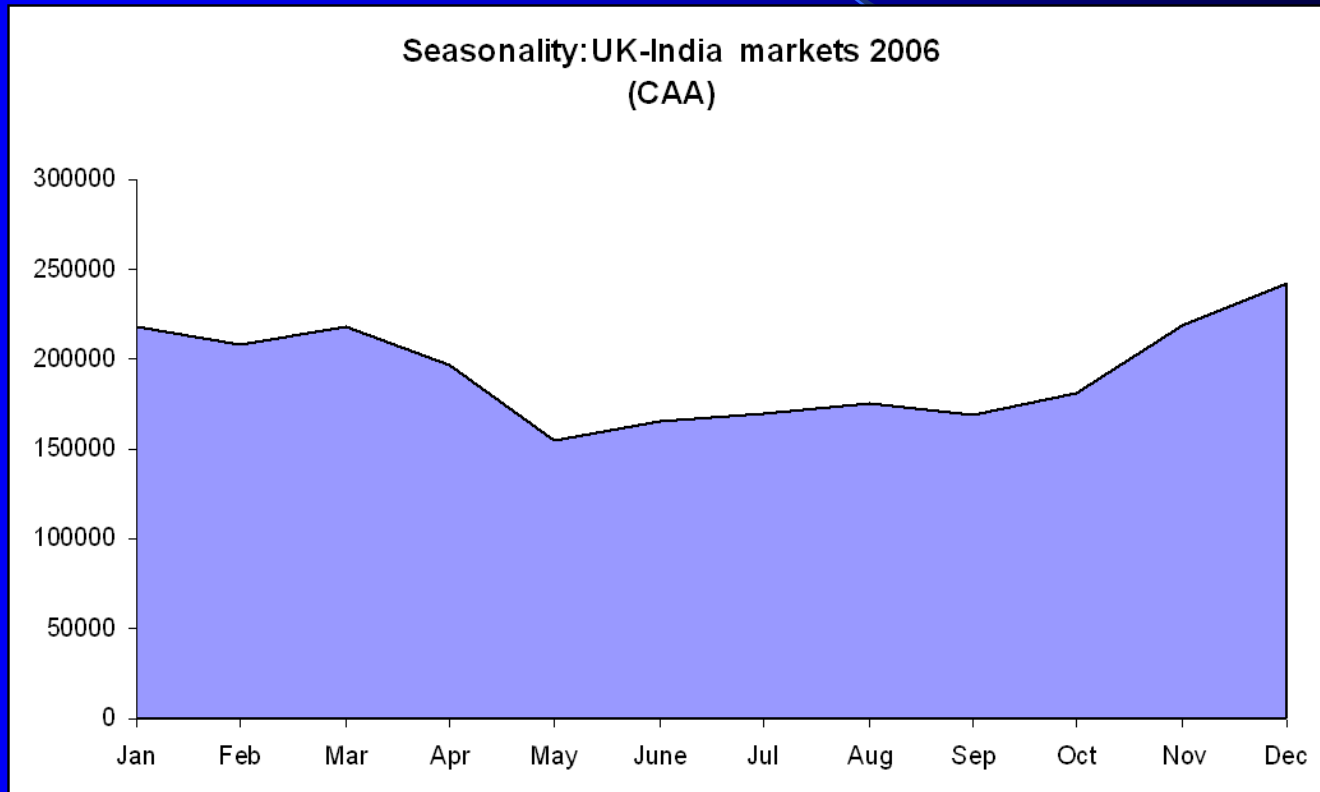
Seasonality

- 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



Seasonality



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 worlds 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

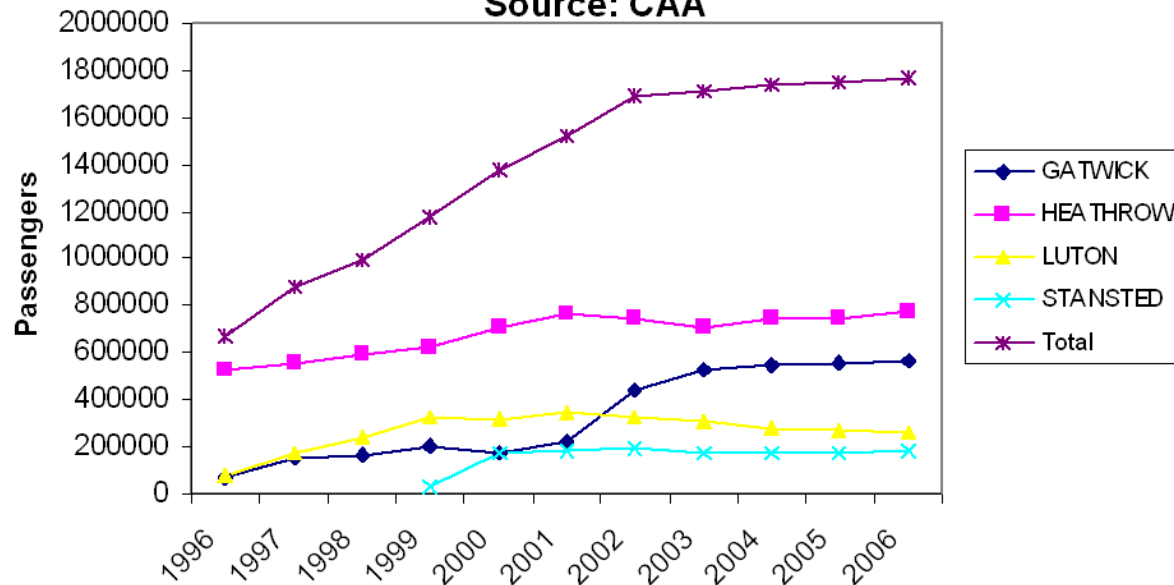
Network planning-Low Cost approach

- The importance of price stimulation
 - New travel
 - Increased frequency of travel
 - Examples:

Network planning-stimulation

Development of London Barcelona market since low cost services commenced

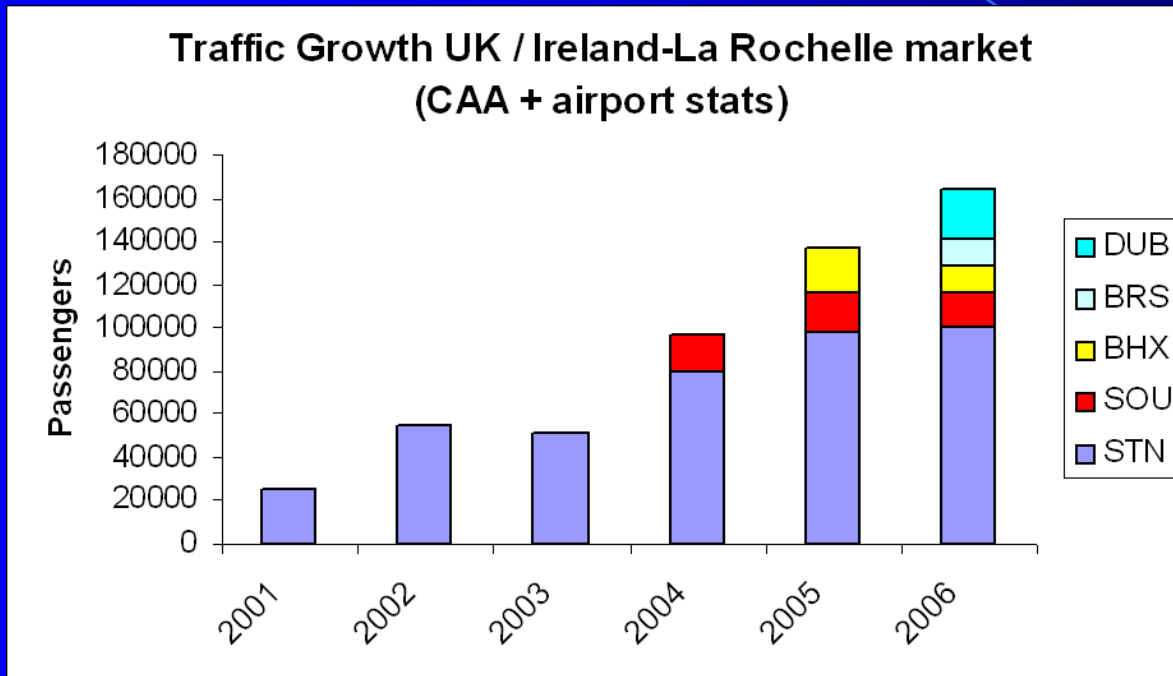
Source: CAA



- 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

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Annual Growth	31%	13%	19%	17%	10%	12%	1%	2%	1%	1%
Overall Growth	164%									

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
 - Whereabouts 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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