

CAA Response to the Airports Commission discussion paper on airport operating models

CAP 1080

The bottom half of the page features a large, abstract graphic composed of overlapping, curved, semi-transparent blue shapes. These shapes create a sense of depth and movement, with varying shades of blue from light to dark. The graphic is positioned on the right side of the page, partially overlapping the white background.

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SECTION 1

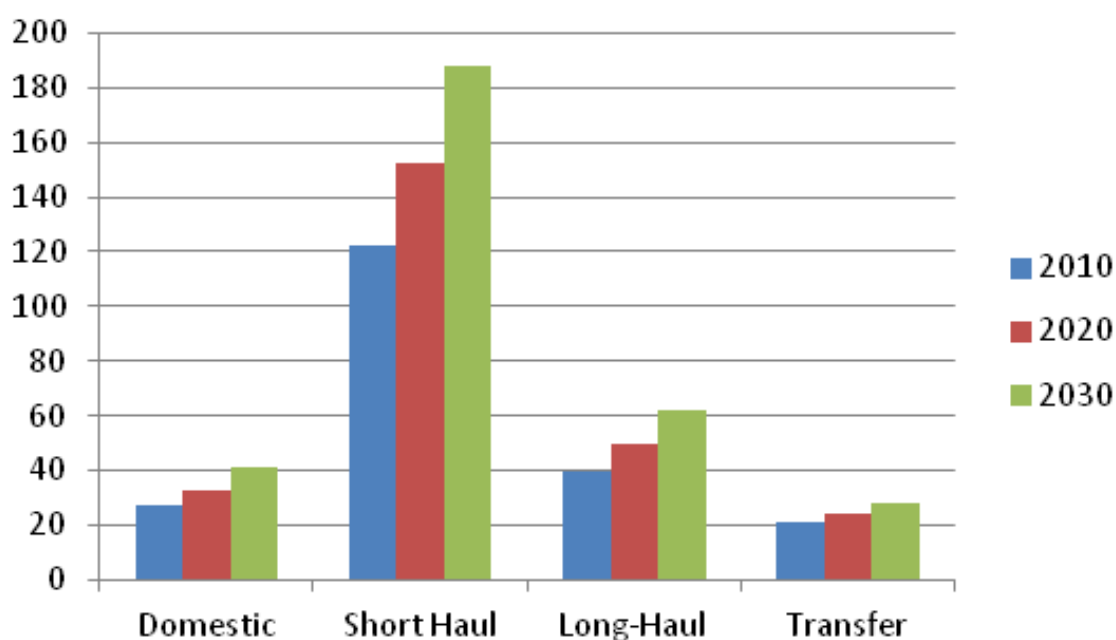
Introductory remarks

- 1.1 The CAA welcomes the Airports Commission's discussion paper on airport operating models.
- 1.2 As the UK's specialist aviation regulator, the CAA has significant relevant expertise. The CAA collects a broad range of statistics and survey data, and has drawn on these resources to provide analysis to the Airports Commission in order to inform some elements of the discussion paper.
- 1.3 Alongside this response document, the CAA is publishing a document containing the analysis that was prepared for the Airports Commission secretariat.

SECTION 2**Response to consultation questions**

Q1. Do you consider that the analysis supports the case for increasing either hub capacity or non-hub capacity in the UK? Is there any additional evidence that you consider should be taken into account?

- 2.1 As the CAA has already set in its response to the Airports Commission's discussion papers on demand forecasting and aviation connectivity, the CAA judges that there is a strong case for additional aviation capacity in the UK in order to protect consumer choice and value.
- 2.2 Capacity constraints have the potential to harm consumers by:
- restricting competition and route choice,
 - affecting value through higher fares, and
 - affecting service quality as a result of resilience issues.
- 2.3 Consideration of the appropriate 'capacity mix' should start also from an understanding of the preferences and priorities of aviation consumers.
- 2.4 Analysis of CAA survey data highlights that aviation consumers are a diverse population and that preferences and priorities vary, even within standard category groupings (such as business vs leisure vs VFR or outbound vs inbound vs transfer). Accordingly, it is difficult to make strict generalisations. However, examining the detail of DfT's most recent demand forecasts offers some interesting insights.

Figure 1: Forecast Passenger Growth 2010-30

Source: CAA calculations based on DfT Passenger Demand Forecasts, 2013

- 2.5 These demand forecasts indicate that, in absolute terms, the majority of growth will be in short-haul markets, which are primarily served by point-to-point services. Passenger growth on the long-haul routes that are most likely to depend on feed from transfer traffic is forecast to total approximately 20 million additional passengers per annum by 2030.
- 2.6 While it is forecast that demand growth on long-haul routes to emerging markets will be faster than the overall average, these routes start from a very low base and will still account for a small share of demand in 2030.
- 2.7 In its response to the demand forecasting paper, the CAA raised a concern that, for some regions and in particular emerging markets, the DfT aggregated over too wide a geographic area. Accordingly, it is possible that the DfT forecasts may underplay some of the future long haul growth in these markets. However, the overall conclusion on the likely geographical distribution of future demand at UK airports is supported by global market forecasts by Airbus and Boeing.
- 2.8 Given the forecast split of demand growth between short and long-haul routes, there would appear to be a case for additional capacity to support a mix of both point-to-point and hub-and-spoke operations.

Q2. To what extent do the three potential futures outlined in Chapter 2 present a credible picture of the ways in which the aviation sector may develop? Are there other futures that should be considered?

Q3. How are the trends discussed in Chapter 2 (e.g. liberalisation, growth of low-cost carriers, consolidation of alliances, and technological changes) likely to shape the future of the aviation sector? Do they strengthen or weaken the case for developing hub versus non-hub capacity?

- 2.9 As the CAA set out in its response to the discussion paper on demand forecasting, attempts to predict the future are, by their very nature, subject to uncertainty. Indeed, history suggests that forecasts are typically wrong.
- 2.10 For example, the majority of the forecasts made before 1975 over-forecast in the long term, as they did not predict the shift in demand caused by the oil crisis of the early 1970s. The same is true for late 1970s forecasts, which follow a similar trend whilst starting from a lower base. By contrast, long term forecasts from the 1980s tend to underestimate the strength of demand growth, and are all under-forecasting by the mid-1990s. Similarly, forecasts from the 1990s somewhat underestimated the growth potential that would be stimulated by low-cost carriers, although these forecasts are generally more accurate.
- 2.11 These examples demonstrate the problems in predicting both the path of external drivers of aviation demand and any structural impact that such changes will have on the sector.
- 2.12 For this reason, the CAA recommends that an appropriate approach to dealing with uncertainty is to adopt policy choices which are not overly dependent on a specific forecast future state but which perform well across a range of potential future states, accepting that such choices may appear sub-optimal in hindsight. The CAA agrees with the principle that the Airports Commission set out in its demand paper, namely that any proposed solution should be robust to a range of different scenarios.

Q4. What are the impacts on airlines and passengers of the fact that the wave system at Heathrow operates under capacity constraints?

- 2.13 The smoothing of the service pattern at Heathrow throughout the day, particularly that of the home-based alliance OneWorld, is just one consequence of capacity constraints at Heathrow.
- 2.14 Network airlines organise flights in 'waves' of arrivals followed by 'waves' of departures in order to maximise the number of potential connections that can be offered within a reasonable time window, thus offering both choice and convenience for connecting passengers and increasing the attractiveness of the hub network.
- 2.15 'Smoothing', or 'flattening' the waves means that fewer potential connections can be made from any given arriving flight within a given time period. This is likely to reduce choice and convenience for connecting passengers. However, on the thickest high-frequency routes, origin-and-destination consumers may benefit from the availability of flights closer to their desired departure time rather than being limited to the main waves.
- 2.16 Overall, it is likely that some of the other consequences of capacity constraints such as the impact on punctuality and resilience are likely to cause greater consumer detriment. Heathrow has a higher share of origin-destination passengers than many major hubs and the direct effects of wave smoothing are limited to connecting passengers. In contrast, delays and disruption affects all airport users.

Q5. How does increasing size and scale affect the operation of a focal airport? Is there a limit to the viable scale of an airport of this kind?

- 2.17 There are three major potential benefits that might be expected to arise from increasing the scale of a focal, or hub airport:
- Increased scope of the route network;
 - Enhanced performance;
 - More effective competition.

- 2.18 Increased capacity could create headroom in order to facilitate growth in the scope of the network, with additional routes added to the network and additional frequencies added to the thickest existing routes.
- 2.19 The high-level analysis of DfT demand forecasts set out in Figure 1 gives an indication of the potential scale of growth in demand for long-haul routes.
- 2.20 Capacity headroom could also enable improved performance by facilitating improved punctuality and resilience to disruption as well as enabling airlines to schedule services into tighter arrival and departure waves.
- 2.21 Finally, additional capacity headroom might be expected to lower entry barriers for airlines looking to start or expand services. This would be expected to increase competition, with consequent consumer benefits.

Q6. Would expanding UK hub capacity (wherever located) bring materially different advantages and disadvantages of expanding non-hub capacity? You may wish to consider economic, social and environmental impacts of different airport operational models.

Q7. Do focal airports and non-focal airports bring different kinds of connectivity and, if so, which users benefit the most in each case?

- 2.22 The response to question 1 sets out the CAA's view that consideration of the appropriate capacity mix should start from consideration of consumer demand and preferences. On this basis, the CAA considers that there may be a case for additional capacity to support growth in both network and point-to-point models of airline operation.
- 2.23 In addition, the CAA would like to emphasise the considerable benefits that UK aviation consumers derive from choice and competition. Over 90% of UK aviation consumers live within 2 hours travel time of at least two international airports. In some parts of the country, in particular the South-East the degree of airport, and by extension airline, choice is even greater.
- 2.24 This choice and competition are strong attributes of the UK aviation 'system'. Accordingly, any solution that forced the closure of significant

volumes of existing capacity in order to create sufficient demand to be commercially viable would therefore be likely to cause detriment to many consumers.

- 2.25 As noted already, the majority of current and future demand will not need to be channeled through a hub airport (although if facilities there are sufficiently attractive, they may choose to use it).

Q8. What would be the competitive effects (both international and domestic) of a major expansion of hub capacity, and what are the associated benefits and risks?

- 2.26 The competitive effects of capacity expansion, whether primarily aimed at network or point-to-point services, would depend on a number of variables, including:
- Location - particularly in terms of catchment area and ability to attract specific consumer groups, but also whether at an existing airport location or not;
 - Impact on other airports - the competitive dynamics may be very different if London's multiple airport 'system' is likely to remain in place than if it is expected that one or more airports will be forced to close for commercial or operational reasons.
- 2.27 For connecting passengers, the relevant geographic market is broader than for origin-destination passengers, as other airports offer an equivalent set of transfer connections. In its market power assessment for Heathrow, the CAA determined that the relevant market should be defined as the other European hubs. It is to be expected that these airports will continue in the market for at least the foreseeable future, whether or not additional airport capacity is delivered in the UK.
- 2.28 As set out already, the CAA believes that competition brings many benefits to both origin-destination and transfer passengers as well as cargo users in terms of choice and value as well as innovation and service quality. The CAA would recommend that the Airports Commission looks to preserve these consumer benefits when it makes its final recommendations.

Q9. To what extent do transfer passengers benefit UK airports and the UK economy?

Q10. Is there any evidence that the UK (or individual countries and regions within the UK) are disadvantaged by using overseas focal airports?

- 2.29 Transfer traffic is important for the UK for two primary reasons:
- Many consumers outside of London and South-East rely on indirect connectivity in order to access the majority of long-haul destinations that are not commercially viable on a point-to-point basis;
 - By supporting marginal routes and frequencies, transfer passengers contribute to direct connectivity for those consumers in the catchment area of hub airports.
- 2.30 Where passengers fly indirectly, transferring via an intermediate airport, their route decision will tend to be based on the standard parameters such as route choice, frequency and journey time as well as affordability.
- 2.31 Overall journey time is made up of a combination of how direct the overall routing is, as well as the stopover time at the transfer airport. The UK's geographical position on the North-West of Europe means that airlines operating at Heathrow can offer competitive journey times for connections to North America compared to other European hubs. Geography would suggest that other European airports might represent more convenient transfer points for routes to other world regions such as Asia, Africa and South America.
- 2.32 Connection times at a transfer airport are driven by a number of factors including airlines' ability to sequence flights into alternating inbound and outbound 'waves'. In the absence of capacity to optimise departures and arrivals, other determinants such as service frequency on the feeder leg will become more important, as this enables airlines to maximise the range of convenient connections.

Q11. What specific characteristics of the UK and its cities and regions should be considered? For example, does the size of the London origin and destination market and the density of route networks support or undermine the case for a dominant hub?

Q12. Could the UK support more than one focal airport? For example, could an airline or alliance establish a secondary hub outside London and the south east, for instance in Manchester or Birmingham?

- 2.33 The CAA provided advice on this question in order to inform the Airports Commission's discussion paper.
- 2.34 This analysis showed that a two-hub solution would not necessarily result in a reduction in the number of transfer passengers using London airports, as:
- Most connections at Heathrow are 'within the family' (i.e. alliance);
 - An airline / alliance moving away from Heathrow could potentially supplement most lost routes through partnership with airlines operating at those airports.
- 2.35 However, as the Airports Commission itself notes, this latter scenario is based on some strong assumptions that are very unlikely to hold in reality.
- 2.36 Airport location is important for passengers that do not transfer. Carriers based at Heathrow enjoy a yield premium that derives from convenient access to the very prosperous catchment areas in West London. The CAA's Market Power Assessment for Heathrow showed very high switching costs for network carriers at Heathrow.
- 2.37 In addition, cooperation between network and low cost carriers (which could be necessary were alliances to move away from Heathrow and rely in part on the existing route network at other airports) has been limited to date.
- 2.38 More generally, there are no precedents in international aviation for two genuinely competing hub networks within the same city. New York and Tokyo are often given as potential examples, but neither are genuine competing hubs from either an airline or airport perspective.

- 2.39 However, there are a number of innovations such as via Milano and Gatwick's new 'Gatwick Connect' service that aim to facilitate self-connecting. It is therefore possible that a way could be found by which traffic from short-haul point-to-point services could feed long-haul routes.
- 2.40 Similarly, it is possible that surface transport improvements could improve the connectivity and attractiveness of some airports to high-yield catchment areas.

Q13. To what extent is it possible to operate a successful 'constrained' focal airport by focusing on routes where feeder traffic is critical and redirecting routes which are viable as point-to-point connections to other UK airports?

- 2.41 In a market-led sector, airlines are much better placed than the Government or the CAA to advise on this question. There are many layers of complexity that are relevant to network-planning decisions, some of which have been referenced elsewhere in this paper.
- 2.42 However, to a certain extent, the London aviation system may already be a reasonable proxy of the type of network that the Airports Commission describes.
- 2.43 For example, while the route networks from Paris Charles de Gaulle and Frankfurt airports are a third bigger than that operated from Heathrow in terms of the total number of destinations served, the difference is much smaller when one focuses on non-European routes.
- 2.44 Capacity constraints have therefore shaped the network configuration by reinforcing the trend towards focusing on the most profitable, high-yield routes. At Heathrow, this is likely to lead to further increases in slot productivity and specialisation on long-haul routes, in particular those serving North America for which Heathrow offers a geographical and economic advantage.
- 2.45 In turn, evidence from the CAA's Passenger Survey suggests that a very large proportion of services at Heathrow have a significant proportion of connecting passengers, including both those operated by home-based and inbound carriers. For example, connecting passengers account for at least of 10% of passengers for 75 of the 93 airlines operating

at Heathrow. This contrasts with the fact that connecting passengers account for less than 10% of total passengers at all other UK airports.

- 2.46 This trend towards specialisation on long-haul routes supported by feed traffic has, in part, been facilitated by the ability of airlines to use other London airports to serve different markets.
- 2.47 As capacity constraints spread to other London airports, particularly at peak times, airlines' ability to redistribute short-haul and domestic routes and services between airports may become more limited.