

### The Need for Additional Runway Capacity in the South East

In announcing its commitment to build a new High Speed Rail line, the Government has signalled a willingness to invest in major infrastructure schemes to secure the long-term future of the UK economy. However, whilst High Speed 2 may have a key role to play in driving economic growth in the regions, London’s future as a global economic capital is likely to depend on its international links. In this regard, the lack of runway capacity in the South East of England represents one of the most serious challenges facing the long term prospects of the UK economy.

The current usage levels at Heathrow – the airport operated at 99.2% capacity in December 2011 – illustrates the need for some incremental capacity as a matter of urgency. A more detailed analysis of current service levels illustrate a much greater need for a step change in capacity, a change which can only be delivered through additional runway capacity.

Alternative approaches have been suggested – such as a massive and unparalleled expansion in High Speed Rail and greater integration across London’s airports. Both options offer substantial logistical and financial challenges.

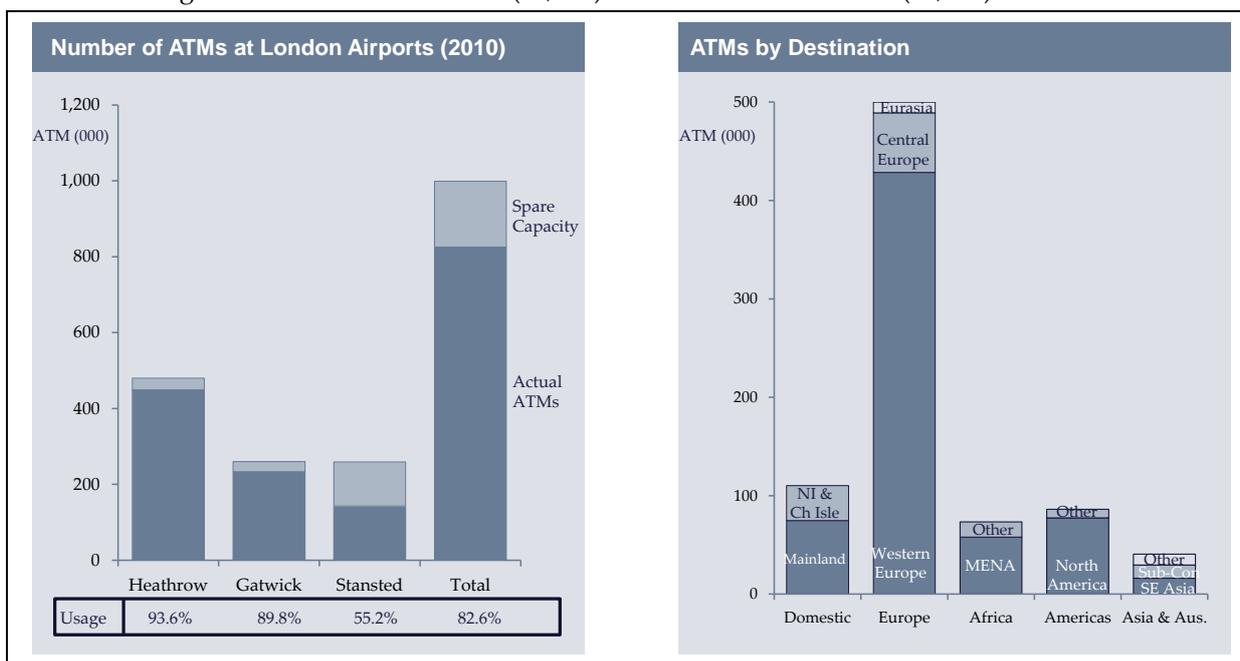
Moreover, our analysis shows that, even allowing for such alternatives, London would still need additional capacity – capacity which can only be delivered through a new multi runway airport.

#### Current Service

Given the well documented capacity constraints at Heathrow, London requires an integrated strategy across its major airports. We have therefore considered the total capacity of London’s three major international airports (Heathrow, Gatwick and Stansted) as a whole, overlooking the logistical and ownership challenges of achieving such integration.

In total, there were 825,000 air traffic movements (ATMs) from these airports in 2010, compared with a total capacity of 999,000 with the current runway facilities. In aggregate, this meant that the major London airports were only operating at 83% capacity. However, this overall statistic masks significant differences between airports, with both Heathrow and Gatwick operating above 89% capacity, and over two thirds of the existing spare capacity concentrated at Stansted.

The significant majority of these flights are for short haul services, with over 100,000 ATMs for domestic flights, and an additional 420,000 (51% of total) to Western Europe. Service levels to the emerging economies are very poor - there were only 22,000 ATMs to the BRIC countries, and there were more flights to and from New York (17,500) than sub Saharan Africa (15,600).



**Services to global cities**

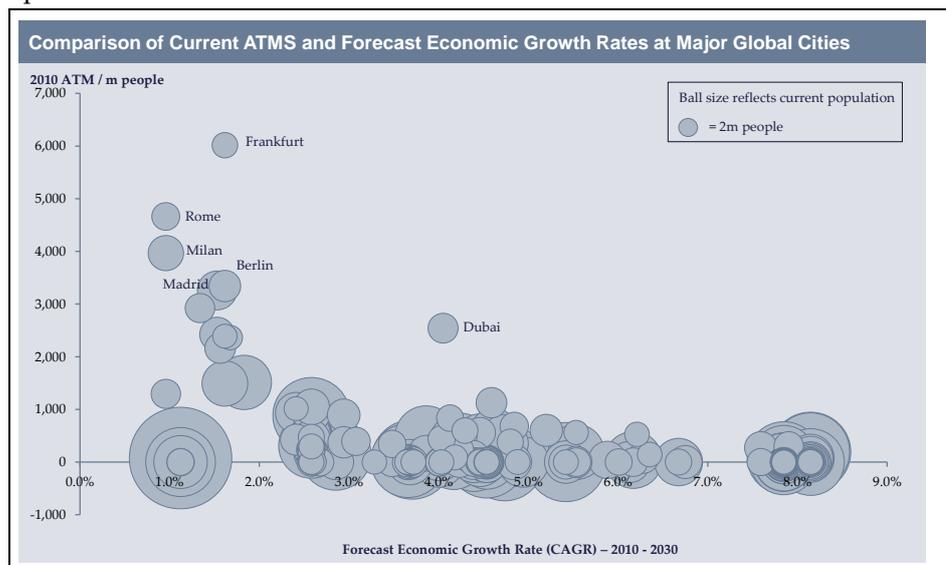
If London is to remain as a leading international commercial centre, it must have strong links to all the major cities. However, our analysis of air services to cities with populations over 2m illustrates that current service levels are insufficient. In 2010, of these 202 cities, 111 (55%) had no service, and an additional 26 had fewer than 732 ATMs per year – equivalent to a daily return flight. Assuming that a daily flight is the minimum requirement to support effective and regular trade, this means that London was poorly positioned to trade with over 67% of the world’s largest cities.



The threat to the future growth of the UK economy is shown even more clearly when one considers which cities are served: London has good air services to the traditional economic centres in North America and Europe but poor services to the future economic centres in Asia and South America -

the cities in emerging economies which are forecast to grow fastest over the next two decades have poor air services from London.

If Britain is to achieve strong business relationships with these emerging markets, it will need regular direct air links to facilitate trade .



This will require either a substantial release of capacity from existing services, or the provision of additional runways.

**Releasing current capacity**

Those people arguing against additional airport capacity would point to two key alternatives which could address the current problems in London (without recourse to the greater use of regional sites):

- The better integration of existing runway facilities to maximise the use of current capacity – a concept most recently mooted in the “Heathwick” plan.
- Significant expansion of High Speed Rail, both in the UK and across Europe to remove the need for short haul flights.

Both of these solutions offer significant challenges. The full integration of London’s existing airports requires a high speed rail network that could effectively link all three airports in journeys of less than 15 minutes, whilst retaining “airside” security - a challenge which borders on the absurd. Moreover, given all three airports will soon be under different ownership, this would effectively require the airports to be renationalised.

Second, a pan-European High Speed Rail network offering a full alternative to short haul flights remains a pipe dream. Whilst High Speed networks are well developed in France, Spain and Germany there is still limited integration of services and tickets. London to (for example) Munich is not viable if the journey demands a change in Frankfurt.

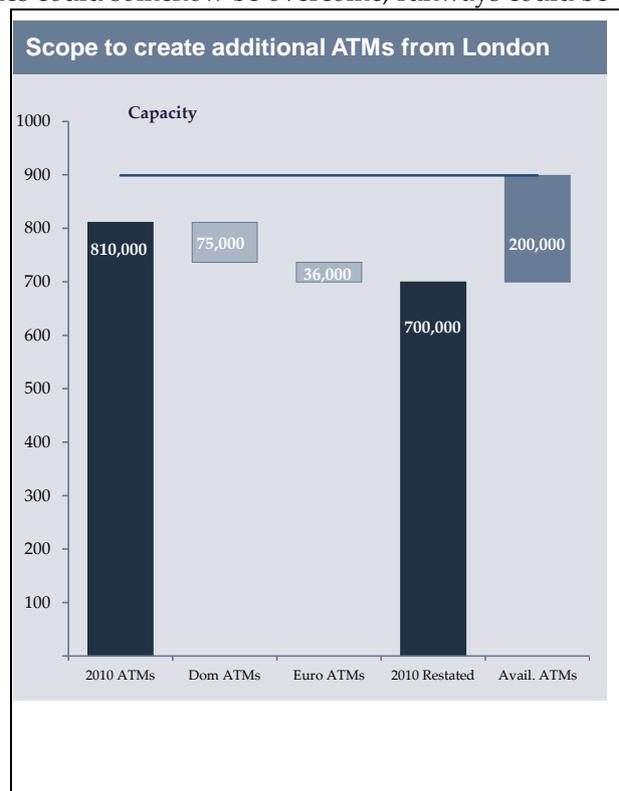
However, the Government has indicated that “all options are on the table” and one must therefore consider this nationalisation and integration as an option.

Credo has modelled a scenario where these obstacles could somehow be overcome, runways could be overcome, and the four runways at Heathrow, Gatwick and Stansted could be harnessed into one virtual airport.

If the virtual airport operated at 90% capacity – the maximum capacity which such an “airport” could probably support if it were to maintain operational resilience - it would produce capacity for c.900,000 ATMs per annum.

In 2010, there were 810,000 ATMs from Heathrow, Stansted and Gatwick. Of these, 75,000 were to destinations in mainland Great Britain. An additional 73,000 were to European destinations on journeys less than 1,000 kms – realistic targets for high speed rail. If all of these ATMs in the UK, and 50% of the ATMs in Europe could be replaced by high speed rail, then 110,000 ATMs could be removed.

Combining the spare capacity realised through integration with this reduction in ATM would create the potential for 200,000 additional flights to or from London per annum.



**Using the availability capacity**

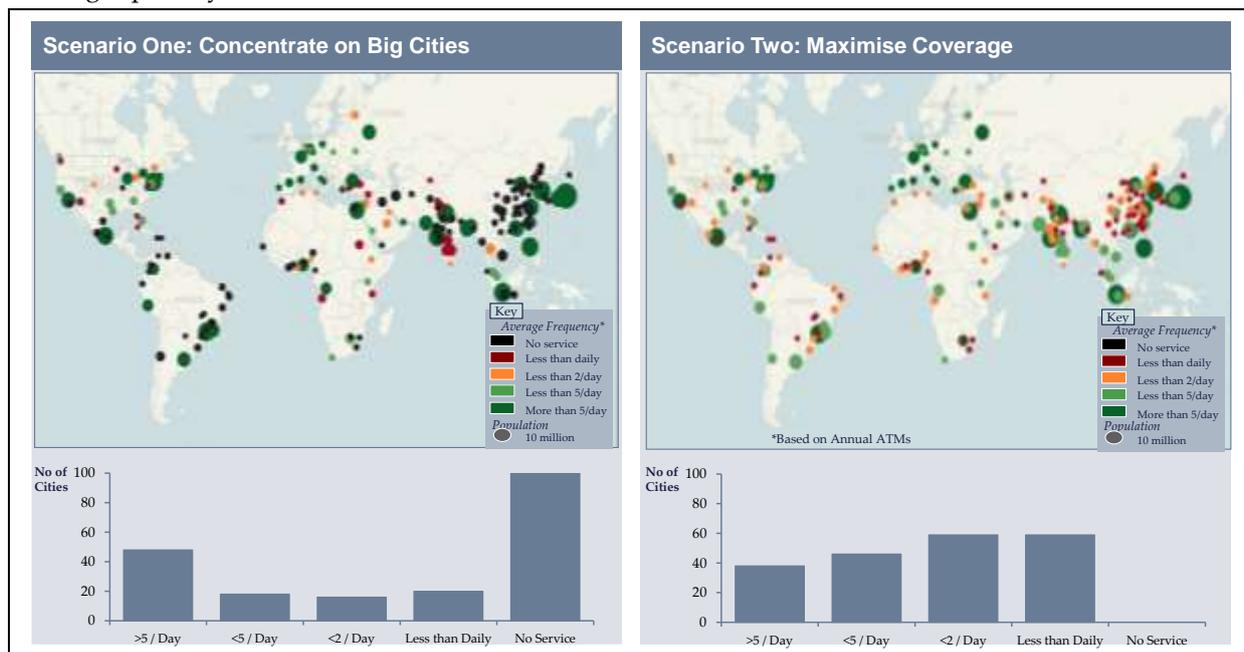
But would 200,000 ATMs be enough to meet London’s requirements and ensure there are strong air links to the emerging cities of the world?

Current services to North America provide a potential benchmark of the number of flights required to support a strong trading relationship. At present, there are direct flights to 20 North American cities with a population over 2m and a total of 58,800 ATMs for a combined population of 112m in these cities – an average of 524 ATMs per million people.

This level may be considered a benchmark for all emerging cities. But delivering such a service to all cities with a population of over 2m (within range of London) would require an additional 423,000 ATMs – more than double the available capacity in our “best case” scenario.

Given the limited capacity, there would have to be compromises in the allocation of ATMs. We have considered two such scenarios

- Scenario One: Focusing on the biggest cities to improve service levels to the North American benchmark. The available capacity would mean that air services could be improved to “North American levels” in 37 cities but 74 cities would still be without a direct service from London
- Scenario Two: Maximising the coverage, ensuring a service to all of the cities. The available capacity would require the target service level be reduced to a third of “North American Levels.” This would mean all cities had a direct service from London but 82 cities would not have a return flight per day.



As shown above, neither scenario is sufficient to support future trade requirements. Scenario One leaves 93 cities (46%) of cities without a direct service, whilst in scenario 2 cities receive only a third of they service they might require and 82 (40%) still would not have a direct daily service.

**Conclusions**

The above scenario assumes the minimum possible requirement for future air travel from London, with a substantial substitution to high speed rail, totally efficient use of London’s existing capacity and no passenger growth on other routes. None of these assumptions, in their own right, are likely to be achievable.

But even under this most unlikely of scenarios, only 200,000 additional ATMs could be handled and it would not be sufficient for the future economy. London cannot establish strong enough air links to the world’s largest developing markets with the existing capacity.

The need for a step change in London airport capacity cannot be overlooked and work should begin on a new airport as soon as possible to deliver it. Constructing such a facility in the Thames Estuary area presents significant political, economic and technical challenges, but they are challenges which must be overcome if London is to remain a global economic capital.