

Air-Rail Intermodality: Optimizing Airport Capacity

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From its opening in 1994, the Roissy-Charles de Gaulle Airport TGV station was designed by Aéroports de Paris (ADP) as a tool for managing airport capacity in the long term. Today's constraints on air transport at major European hubs prove the relevance of the intermodality concept. The gradual saturation of major European hubs and the growing scarcity of air slots will lead to a shift of less profitable routes to other airports and other modes—mainly railways. A good example of this is the recent strategic alliance between French National Railways (SNCF) and British Airways (BA) over the operation of *Eurostar*. Therefore, air-rail intermodality is a strategic opportunity for airports handling either passengers or freight, or both. The TGV station in Roissy-Charles de Gaulle Airport provides an obvious comparative advantage over competitors, putting Brussels, London, Amsterdam, Cologne, Frankfurt, Lyon, Marseille, Nantes, and Bordeaux within 3 hours by train from the Airport, not to mention the convenience of reaching Paris in less than 30 minutes. In 1996, about 50,000 flight slots at Roissy-Charles de Gaulle Airport were in competition with

the TGV, and carried 4 million passengers or about 80 passengers per flight.

By reducing access times to major cities in the so-called 'blue banana' (north, northeast, east and southeast EU), the TGV network expands the Paris catchment. Some airports that are well connected to the TGV network, like Lyon, Lille or Liege, could present an alternative to the saturated Paris airports.

From Infrastructure Integration to Services Integration

But integration of the air-rail infrastructures is not enough to ensure a major modal shift. The services of each mode must also be integrated in order to ensure the same travel continuity already achieved by connecting flights.

Passenger intermodality

The TGV station at Roissy-Charles de Gaulle Airport has registered a steady increase in passengers since it opened in 1994 and passengers exceeded 1 million in 1997. Sixty percent were connecting with a flight, and the remainder were TGV

passengers from suburbs near the Airport as well as visitors to the Exhibition Hall located close to the Airport.

Such success is mainly due to the good coordination between TGV trains and flight schedules. Indeed, SNCF has tried to optimize schedules based on the main departure and arrival times of priority flight groups (North America, Southeast Asia, etc.) as well as on the constraints inherent to their TGV network.

Expected improvements mainly concern signalling, which is completely different in the railway and airline worlds. In this field, Aéroports de Paris and the SNCF are actively cooperating with the Eurotracs Project financed by the EU and responsible for devising and testing solutions adapted to intermodal and cross-border passengers.

Intermodality must offer customers a comprehensive passenger and baggage check-in service from departure to arrival. This means setting up airport check-ins in railway stations, developing fast and secure luggage processing (forwarding and connections), and defining handling procedures in adverse situations (delays,



TGV station in close proximity to Roissy-Charles de Gaulle Airport

(JB. Laroux)



TGV standing at platform in Airport

(Studio Pons)



Airport station and terminal buildings

(F. Robineau)

accidents, etc.). Air France and SNCF are currently testing an experimental system for TGV departures from Lille.

Unified reservation systems and through ticketing would increase the attractiveness of intermodality. Discussions are under way at the EU level to integrate the railway booking system with the airline reservation systems. Although progress is slow, it seems likely that partial agreements may develop over the short and medium terms for particularly congested airports like Paris, Amsterdam, and Frankfurt. (London Heathrow and Gatwick are not yet connected to any long distance network.) New information technologies, particularly the Internet, could offer intermodal sales and reservation possibilities.

Lastly, the promotion policy should be reinforced to publicize intermodal services (through travel agencies, tour operators, customer loyalty programmes, information in airport terminals, etc.). Surveys show that the possibilities offered by intermodality at Roissy-Charles de Gaulle Airport are still not well known by the public, although people are widely familiar with the TGV network and the airline services. Clearly, intermodality has not yet penetrated into the everyday life of travellers nor into the world of professionals like travel agencies.

Freight intermodality

Air-rail intermodality is less advanced for freight than for passengers. However, there is increasing prospect for air-rail freight intermodality due to strengthening environmental restrictions regarding road freight and air transport. Shifting short-distance freight like mail to railways, especially to the TGV, could help optimize air-freight slots mainly at night.

The first feasibility studies on a TGV and conventional railway connection to the freight area of Roissy-Charles de Gaulle Airport have already been carried out by SNCF and ADP. The problems that need solving relate to:

- Financing and more generally, the project's economic feasibility
- Availability of lines on the SNCF network (TGV North and TGV South-East, the most important lines in the network, are largely saturated, and SNCF carries out maintenance at night.)

- Possibility of accessing the railway networks of other EU countries (traffic rights, infrastructure compatibility, etc.)
- Compatibility/consistency of logistical equipment and information systems on transfer platforms

Aéroports de Paris belongs to a European group selected by the European Commission to study air freight intermodality. The results of the study will be submitted to the Commission before the end of 1999, and will specify the economic and regulatory conditions as well as the technical specifications for the development of air-road-rail intermodality.

Some light will be shed on the feasibility of an air-TGV express freight network operating together with the freight forwarders such as TNT, Federal Express, and UPS on the Cologne-Liege-Paris-Lyon TGV axis, which is a priority for ADP. ■



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