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## THE POWER OF PARTNERING

A Conversation with  
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Secretary General  
Arab Air Carriers  
Organization.



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High-speed trains impact Europe's airlines

# Fast Track

*High-speed train lines, because of their ability to competitively serve the same routes as some carriers, have had a substantial impact on Europe's airlines.*



■ By Michael Clarke | *Ascend* Contributor

Europe, France in particular, has been at the forefront of the development of regularly scheduled advanced high-speed rail passenger service. Since the early 1970s, France has developed a comprehensive rail network that leverages existing rail tracks and has led to the establishment of dedicated high-speed tracks. This has, in turn, led to improved service quality, with higher average speeds and increased frequency of service.

Within the French domestic market, high-speed rail commands a leading market share. In some city pairs, rail service accounts for more than 90 percent of the shared community passenger service (rail, air, bus). This phenomenon has gradually spread across continental Europe, and similar rail networks now exist in Germany, Spain, Belgium and the Netherlands. Naturally, this has created a powerful competitor for air travel, especially in short- to medium-haul markets with flying times less than three hours.

Within the last decade, we have seen the introduction of cross-border high-speed networks with Eurostar (Paris-London) and Thalys (Paris-Brussels) providing regularly scheduled service from France to neighboring countries. Today, the Thalys service dominates the Paris to Brussels market, and there are no longer scheduled airline flights between the two cities. Eurostar has managed to gain a substantial market share (65 percent) in the London to Paris market, a city pair

that was once the largest air route worldwide based on the number of passengers boarded. Today, the two major United Kingdom network carriers that serve the London-Paris route have substantially reduced the number of scheduled flights in the market.

Recently, high-speed railways of several countries, including Austria, Belgium, France, Germany, Switzerland and the Netherlands, joined forces with Eurostar and Thalys to create Railteam — a new marketing alliance to better compete against other modes of transportation, specifically



Photo courtesy of RailEurope

Rival of many airlines in Europe, Thalys, also known as the red train, links Paris to Amsterdam, Brussels, Cologne and Dusseldorf. At a speed of 186 miles per hour, 18 Thalys trains per day take passengers from Paris to Brussels in under 90 minutes.



Austria, Belgium, France, Germany, Switzerland, the Netherlands and other countries with high-speed railways aligned with Eurostar and Thalys to create Railteam — a new marketing alliance to aggressively compete against other forms of transportation, specifically air travel.

Photo courtesy of RailEurope

that's clear, the level of competition among established network airlines, growing value-based carriers, existing rail services and yet-to-be-determined rail competitors will be beneficial to the traveling public.

Proponents of each mode of transportation (air travel and rail service) often highlight the underlying level of public subsidies and special arrangements such as tax exemptions on fuel charges that influence the success of a given transportation system. While these debates continue to rage on, the competition between air travel and high-speed rail service will only intensify in the coming years. The ultimate winner will depend on many factors including but not limited to convenience, cost of travel, comfort, connectivity, conscience, congestion (airspace and airport), competition and cooperation. These factors, in turn, influence passenger behavior and preferences and will dictate the preferred mode of transportation.

Travelers' preferences will vary depending on the primary purpose of the trip. Since most business passengers do not pay directly for their trips, they place a greater emphasis on travel time, reliability and comfort as well as the ability to work enroute. On the other side of the spectrum, leisure passengers tend to be more cost sensitive and are willing to compromise on convenience for a better ticket price. However, most passengers still prefer air travel unless there is a compelling advantage of journey time and total travel cost. This is especially

air travel. The goal is to develop a centralized Web site that will enable travelers to view timetables and published fares, and in one streamlined process purchase tickets for travel across the entire rail network (from one end of Europe to the other).

Since deregulation of air travel within Europe, competition between established airlines and developing high-speed rail networks has been heavily influenced by emerging value-based carriers such as easyJet and Ryanair. In many cases, these new-breed airlines offer competitive scheduled flights from primary and secondary airports that are able to compete against both network carriers and burgeoning high-speed rail networks. The success of high-speed rail in most markets can be attributed to many factors, one of which is convenience. The ability to provide fast and convenient service to and from the city center is very attractive to business travelers, especially when the population density is centered around the city center. This is true of many of the French TGV, Trains a Grande Vitesse, lines, the German ICE, Inter-City Express, lines, the Paris-London Eurostar and the Paris-Brussels Thalys passenger services. At the same time, the rapid growth of value-based carriers in many parallel markets (relative to existing high-speed lines)

is attributed to the gradual dispersion of populations outside city limits. This is particularly true in the leisure market, where

**HIGHLIGHT**

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travelers from areas such as the Midlands in the United Kingdom now have the choice of using convenient air service from secondary airports to major cities across Europe such as Paris, Amsterdam, Frankfurt and Brussels. It is unclear today what the pending deregulation of international passenger rail services will bring in 2010, but one thing

true of passengers traveling on same-day return trips. It is imperative that airlines and rail transport companies understand why people decide on a given mode of transportation so they can better match (or at least try to meet) the quality of service anticipated and demanded by the traveling public.

**Convenience, Congestion, Conscience**

There are many aspects to the notion of convenience when looking at each travel mode including travel time, frequency of service, schedule reliability, network connectivity and accessibility to the corresponding gateway (airport or station). Even if the main transportation is quick, if it is hard to get to, passengers may not consider it as a viable option and choose to use the travel mode that, on the surface, appears less attractive.

When considering travel time, travelers often look at both the actual time spent on the transportation itself as well as the additional time required for the entire journey including:

1. Access time — The time in advance necessary for a passenger to leave the point of origin until reaching the airport or train station,
2. The egress time — Time between arrival at the intended transportation point and the passenger’s final destination,
3. The wait or transfer time (if required),
4. Terminal time — Time required for check in, security checks, immigration and customs (if required).

The frequency of service looks at both the number of departures by time period as well as the distribution of departures across a given day. The ability to use a direct routing without transfers will be more attractive to travelers, an important reason why some value-based carriers have been able to effectively compete in some markets against network carriers and the burgeoning high-speed rail services.

Schedule reliability is important to both rail and air travelers, and it’s more important because of increased congestion at airports and within the air space. The strong growth in air travel during the last couple of years has resulted in increased capacity problems at major European airports and network congestion throughout Europe’s air traffic control network. As a result, the number and pro-

pensity of delayed flights has increased substantially, and so has the level of frustration for airline passengers.

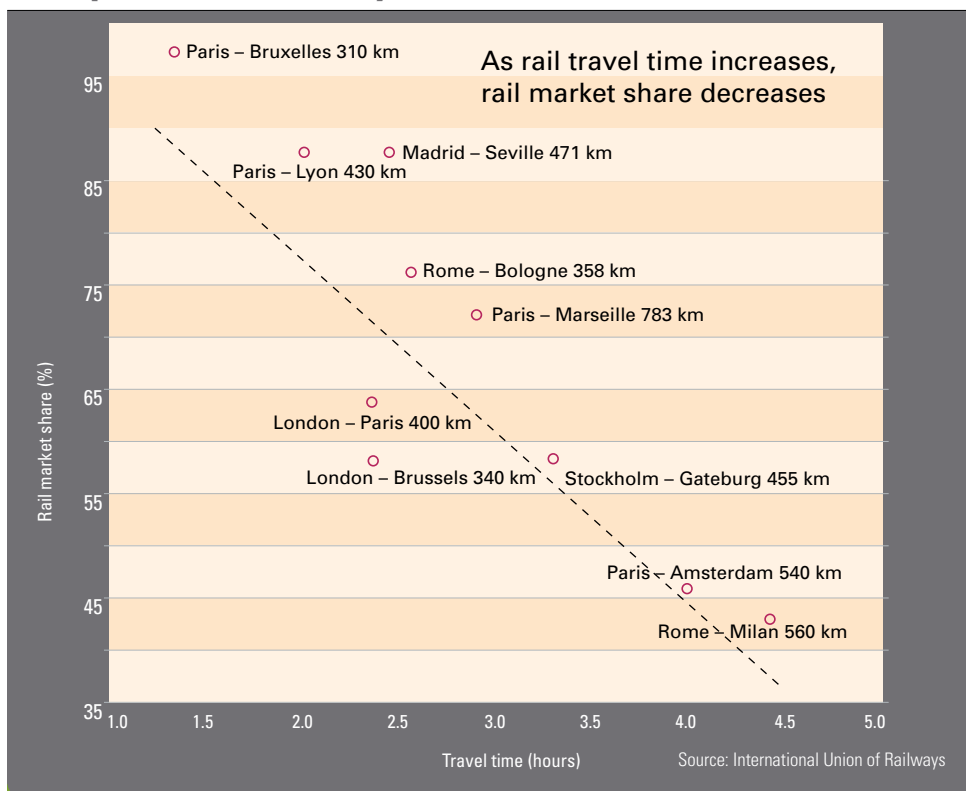
The issue of congestion is more pronounced at major hub gateways such as London Heathrow Airport, and this has enabled value-based carriers to offer more reliable air service from secondary airports and effectively compete against both network carriers and high-speed rail. According to figures from the United Kingdom’s civil aviation authority, airline on-time performance at London’s major airports average 70 percent. In contrast, Eurostar’s punctuality in 2006 was more than 90 percent, much better than airline competitors on both the London-Paris and London-Brussels routes.

Similar on-time performances have been observed in the Spanish domestic market, where high-speed AVE, or Alta Velocidad Española, trains run with 90 percent promptness. Until now, the Eurostar covered the 250-mile distance between downtown London and downtown Paris in two and a half hours without any additional ground transportation. But recently, this travel time was further reduced to two hours and 15 minutes with the opening of the new international rail station at London’s St. Pancras. Travel times from London’s city center to Brussel’s city center is less than two hours.

Many passengers are frustrated with the hassle factor associated with increased security measures. They simply find it more convenient, less stressful and easier to travel by rail when possible. The quality of the travel experience offered by rail is now seen by many passengers as more attractive because they require less access and egress time, and they are able to work while enroute in a more comfortable environment.

It is also important not to overlook the role of environmental concerns in consumers’ decision making. Most travelers tend to believe that high-speed rail is friendlier to the environment when compared to air travel. By providing faster services, railway companies hope that the rising environmental concerns will drive more passengers to rail travel. Recent surveys of the traveling public have identified that concern over the environmental impact of travel is rising, but it is still not a key factor for passengers when they make their travel booking. For the time being, cost of travel and convenience (speed, frequency, reliability and accessibility) are the dominant factors in making the final decision on what mode of transportation to choose.

**Comparative Journey Times Versus Rail Market Share**



In European, high-speed rail commands the dominant market share for origin-destination markets with travel times less than two hours. Rail market share is driven by overall travel time and not necessarily the distance traveled between the city pairs. High-speed rail networks with higher average speeds are able to attract more passengers from air travel.



Photo courtesy of RailEurope

Since it began operations three years ago, Eurostar has more than doubled the total number of passengers traveling (by air and rail) between London and Paris/Brussels. On routes across Europe with two-hour rail travel time or less, the high-speed rail dominates a 90 percent market share.

As the attractiveness of high-speed rail increases in Europe, it could potentially lead to a reduction in the number of short-haul flights across the continent. In reality, the majority of scheduled flights in Europe are short haul (45 percent less than 500 kilometers) and revolve around the current economic center of the European Union (the zone between London, Paris, Frankfurt and Amsterdam). As a result, the continued growth and development of high-speed rail in these

Paris-Marseille air/rail market. Within four years of operations, the market share of rail increased to 65 percent and by 2006, rail commanded almost 70 percent market share. This in turn led to easyJet abandoning its Paris-Marseille flights as it could not effectively compete with the TGV.

In Spain, the AVE has a leading market share in the air/rail/road traffic on the popular Madrid-Seville route. The success of the Eurostar and Thalys service to/from France has led many carriers to discontinue or significantly reduce their operations on these air routes. Since starting operations in November 2004, Eurostar has more than doubled the total number of passengers traveling (by air and rail) between London and Paris/Brussels. On routes within a two-hour rail travel time, it has been consistently observed across Europe that high-speed rail can command a 90 percent market share. The recent introduction of the TGV East line connecting Paris to eastern France and neighboring countries will see rail travel times reduce by half, if not more in the coming months. Currently, the rail trip from Paris to Strasbourg takes four hours, and once it's reduced to two hours and 20 minutes, it's anticipated that the high-speed rail service will initially gain 75 percent market share and ultimately reach 90 percent market share.

As new high-speed tracks are introduced across the continent, traffic routes that were once considered inaccessible to high-speed rail service will develop,

have started to coordinate their timetables, and the amount of connecting traffic has increased substantially. For example, the number of passengers transferring from Eurostar to the TGV network has increased almost 40 percent this year. At the same time, many value-based carriers have been forced to reduce their ticket prices to remain competitive with these rail services and maintain their high load factors for profitability.

Many network carriers have abandoned their short-haul markets that compete directly with high-speed rail, and British Airways went as far as selling the majority of its short-haul network to value-based flybe.

Despite the success of high-speed rail, airlines (both established network and new value-based carriers) are still able to effectively compete with rail service by offering a wide range of ticket prices that are, in some cases, a fraction of the rates for rail tickets to the same destinations. In some European markets, air travel continues to dominate. From 1995 to 2004, air transport within the European Union (intra-E.U. and in each domestic market) experienced nearly a 50 percent increase as a result of deregulation and the rapid growth of value-based carriers. In 2005, the total number of passengers carried on domestic air travel amounted to more than 160 million, representing almost a quarter of all air travel in Europe.

In markets where high-speed rail networks have not been fully established, the corresponding airports have seen immense growth since air travel deregulation. Air transport is able to quickly establish operations and react immediately to new passenger demand situations. Among the 30 airports handling the largest passenger volumes in 2005, Madrid Barajas International Airport served 19.5 million domestic passengers, Paris-Orly Airport served 15.6 million, Barcelona Airports served 13.1 million and Rome Fiumicino Airport served 12.1 million.

Madrid-Barcelona represents the largest air travel market within the European Union, with 4.3 million passengers carried on more than 60 scheduled flights per day in each direction. In this particular origin-destination market, the high-speed rail network is still under construction, and it is anticipated that a highly contested competition will eventually develop between the existing air travel shuttle services and high-speed rail.

Today, air fares offered by established network carriers between Madrid and Barcelona are relatively high because this market primarily comprises price-insensitive business traffic. In addition, the number of

**HIGHlight**

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travel markets could arguably help reduce the environmental impact of air travel in Europe.

**Competition**

The ability of high-speed rail to effectively compete with air travel is most evident in the French domestic travel market. Before the introduction of the TGV Mediterranean in 2001, rail held only 22 percent of the combined

and air travel will potentially decrease, depending in part on the role the rail service plays in the given market.

The level of competition between rail and air services in short- to medium-distance markets is heavily influenced by the presence of low-cost carriers. In some cases, air travel is cheaper as well as faster than rail travel. As the competition between high-speed rail and short-haul air travel intensifies, rail companies



During the last 10 years, cross-border high-speed rail services, such as Thalys from Paris to Brussels, has increased significantly, providing regularly scheduled service from France to neighboring countries. Because the Thalys service dominates the Paris to Brussels market, scheduled airline flights on this route no longer exist.

scheduled flights has been previously constrained by limited infrastructure (terminals and slots) at Madrid Barajas International Airport, which was addressed last year with the opening of a new state-of-the-art passenger terminal.

The growing presence of value-based carriers at these high-volume airports will influence the ultimate impact of high-speed rail on air travel to and from these airports. Only time will tell which travel mode will prevail, dictated in part by passenger choices.

### Collaboration

The impact of high-speed rail on air travel in Europe is, however, a two-sided story. In one situation, they are fierce competitors, while in the other, they are partners providing effective and efficient inter-modal transportation options to the traveling public. The level of cooperation varies from simply coexistence at a common location to outright codesharing and coordinating alliance services that enable seamless transfers between each mode of transportation. Since the introduction of high-speed rail, an

important emphasis has been placed on network connectivity, with a large number of existing European high-speed rail networks having access to primary international air gateways in corresponding countries. Passengers are given the opportunity to purchase end-to-end journeys across air travel and rail using a single ticket as well as the convenience of direct connection at the airport.

In major airports, such as Paris Charles de Gaulle International Airport, Amsterdam Airport Schiphol and Frankfurt Airport, the transfer path from a flight arrival to a train departure is more or less equivalent to a flight-to-flight connection.

High-speed rail is able to expand the effective catchment area on an airport based on the premise that time, not distance, is the primary aspect of airport access. The continued success of both existing and future collaboration between high-speed rail and air travel will depend on the negotiated tariff structure and streamlined passenger connection services. If the negotiated tariff structure is based on

travel distance, similar to the existing structure in the airline industry, the high-speed rail feeder services may be placed at a commercial disadvantage in terms of their corresponding compensation. This could discourage them from playing an overall beneficial role in an inter-modal environment.

Since a local rail passenger would most likely end up paying more than a connecting air passenger, the rail service could limit the number of connecting air passengers. With the pending introduction of the recently signed open-skies agreement between the European Union and the United States, it is anticipated that high-speed rail will play an increasing role to provide connecting service from secondary markets to major connected hub airports with established trans-Atlantic services. At the same time, it's unknown how the development of additional direct trans-Atlantic flights to and from secondary airports will impact passenger levels at these hub airports.

The future coexistence of high-speed rail and air travel within the intra-European market will depend on several external factors including established and proposed regulations as well as the development and improvement of supporting infrastructures. The recent introduction of European Union regulation on flight delays and cancellations in conjunction with increasing competition from high-speed rail may ultimately encourage and/or force network carriers to fully abandon short-haul flights that can be better served by high-speed rail. As each European city modernizes its primary rail stations and further improves connectivity between the complementary high-speed rail networks and local transportation networks, both the competition and the collaboration between high-speed rail and air travel will only intensify in the coming years. ■

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