

2050 – The future of air transport

The Association of European Airlines (AEA) welcomes the European Commission's initiative to draft a Communication on the Future of Transport, and wishes to contribute the following comments:

This paper is based on two assumptions:

- There is currently no practical alternative to air travel for mid- to long-distance journeys (>1,000km), although high-speed trains (HST) can efficiently replace, or compete with, air transport for journeys of less than 1,000km. This situation will probably continue for the next few decades.
- Demand for air travel, especially long-distance freight and passenger transport demand, will continue to grow, as it has almost continually since the 1960s;

This scenario must however be refined by the addition of elements that will almost certainly affect air transport in the future, and more especially in Europe, i.e.:

- Aviation's dependency on fossil fuels;
- Capacity crunch.

A demand for more efficiency

Demand for air transport will not subside, just the contrary, but its nature will progressively evolve following the line of the population trends (ageing and more eclectic due to immigration) and business (ever more "global"). Passengers, freight forwarders, etc. will want to be able to simply tap into their mobile phone, internet, i-pod or similar devices to enter their departure address and required destination address, their required level of service, number of people and amount of freight to be transported, dates of requested travel, commercial options, method of payment, and other special requirements, etc. The e-system they access will then provide them with the necessary information and options to travel the desired route, using various modes of transport. This kind of holistic approach will result in a comprehensive door-to-door service. Key is that the customer will be able to decide his/her preferred combinations of mode of transport.¹

¹ This is recognised by the Focus Group's Report, id., p. 30 §109, although AEA believes this is a far more prominent issue that is co-related with the need for more co-modality.

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In order to achieve such a safe, secure, seamless, (cost-) efficient and flawless transport system in Europe, decisions on an effective co-modality policy will need to be made soon, closely followed by concrete measures. This would lift co-modality to the level that is required for Europe to maintain its competitive position and in doing so preserve the sustainable development of the continent for generations to come. Opportunities for the further development of a truly integrated and co-modal transport system are of direct benefit to customers and will also strengthen the European objective of the greening of transport as a whole.

There are however certain prerequisites that need to be considered prior to the development of a sustainable case for co-modality. The first one is to develop an adequate infrastructure comprising train stations at airports, road-rail combinations, air-road combinations and adequate frequency and scale of operations to accommodate large numbers of passengers and specific freight dimensions.

To achieve a high level of consumer friendliness, such a system must also include – inter alia – harmonisation of the security and operational systems, service level coordination of schedules, access to reservation systems under the same conditions and the option of integrated air rail ticketing. Public transport within cities – e.g. underground, bus, tram, taxi, etc. - might ultimately be brought into the equation as well.

In order to achieve such an integrated and co-modal European system, public investment is indispensable. In addition, technological developments and their implementation will remain a prerequisite to achieve the goal of a healthy and sustainable transport sector in the next decades.

Technology and co-modality

Sensitivity to the sustainability of aviation and scarcity of fossil fuels will become even more acute as time passes, meaning that aircraft and engine manufacturers will need to find alternative fuels based on non-fossil and/or green sources of energy. As a consequence, although it may look like a quantum leap today, and provided research & development is encouraged, it may be possible for airlines to substantially improve their carbon footprint, to the point where they could be deemed “carbon-free”, by 2050². Even a more conservative approach based on empirical evidence suggests that the application of the four-pronged emissions containment policy³ would, in the coming decade, bring substantial reductions in greenhouse gases emitted by air transport, although the level of that reduction remains difficult to quantify.

² According to IATA, fleet fuel efficiency has improved by 3.1% from 2006 to 2007 (more than 70% since 1950), leading it to predict that, by 2020, aviation could ambition to cap its absolute level of CO2 emissions irrespective of its growth, and by 2050 to claim for a zero emission policy. IATA, “Strategy to Address Climate Change”, June 2007.

³ AEA, “Emissions Containment Policy”, March 2008.

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Whilst efforts have been made since the 1980s to efficiently allocate existing infrastructure and adapt it to rapidly increasing traffic levels, it will prove insufficient in the short-term, and certainly in the coming decades if a true revolution doesn't take place in the meantime. China and India for instance are addressing the demands of a burgeoning market by building dozens of new international airports, but they are not – and they cannot – create infrastructure in view of the next 40-50 years; their – and others' – horizon is closer to the 10-year timeframe.

So, irreplaceable, green but constrained? It is true that Air Traffic Management (ATM) authorities have, since the first use of a primary radar in the 1940s, so far failed to radically change their traditional *modus operandi*, obliging aircraft to follow imaginary airspace routes by keeping a significant distance from each other, a paradox when considering the vastness of the airspace resource, and a major cause of congestion both in the air and on the ground.

Although it has been correctly stated many times that technology is not an end per se, it remains a major enabler of growth. It must and will play a crucial role in helping to solve this dilemma. A focused and careful implementation of technological improvements both in the air and on the ground, could double - or maybe even triple - traffic, especially if championed by the relevant authorities. However, crucial decisions on air transport infrastructure will need to be made soon⁴.

Irrespective of their content and thrust, these decisions will have to accommodate the need for a much more integrated transport policy: integration of European air transport with the rest of the world of course, but also integration of air transport with other modes of transport; integration of various ATM systems, leading to a few harmonised ATC centres across the globe using standard practices, but also integration of communication systems/IT based on exchanges of data that connect the different elements of a journey, from road to rail, and from rail to air or sea⁵. Fragmentation is, and will remain, one of the major impediments to an integrated transport system.

Meanwhile, the industry will continue to be shaped by an evolving demand and an adapting supply.

⁴ In its "The Future of Transport", the Focus Group's Report indicates that due to the ageing of the population, important amounts of public funding will be divested into non-transport related infrastructure, February 2009, p. 36.

⁵ This is well summarised in the Focus Group's Report, id., p. 35. "Some of the challenges to a growing demand for mobility come from the existence of a network that is not integrated, it is often overloaded and it is sometimes obsolete. The different transport modes have historically developed their networks independently of each other giving rise to intermodality frictions".

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A borderless supply

Since deregulation in the early 1990s, air transport has for the first time in its history gotten rid of one of its fundamental underlying pillars, namely the nationality clause, within the boundaries of the then 15 EU Member States. Today, the right of establishment of EU carriers has been extended to 27 countries. This has had an immediate impact: almost overnight, LCCs have integrated the “poly-base” concept into their business model, establishing regional hubs at various airports and in various countries.

Network carriers didn’t follow suit immediately: firstly, because their dependence on a hub-and-spoke airport prevented them from doing so and secondly because the congestion at European hubs prevents larger operators from transferring a large part of their business abroad. This remained the case until a first wave of consolidation, started by the merger of Air France-KLM, took place in the early years of the 21st century. By acquiring, or merging with another carrier, airline A automatically gets access to the hub of airline B.

This first wave of consolidation will give rise to further waves, as has happened in other, more mature, industries. In competing markets, “balance of power” tends to be the name of the game, and a merger or an acquisition automatically triggers a reaction from direct competitors. Air transport is no exception: consolidation has started and will continue. And although the form of this consolidation remains to be determined, the number of independent carriers will gradually diminish. International alliances will continue to play a crucial role, and will probably even extend in scope, at least in the first decades of the 21st century. But the movement initiated in Europe in the early 2000s will have important knock-on effects, firstly in the European Union and then internationally, gradually replacing loose alliances with stricter and more formal ties.

The major barrier for this to happen remains the principles embedded in the Chicago Convention, whereby carriers must have ‘citizenship’ in a State; in exchange, they receive the right of designation from that State, which is a pre-requisite for becoming a party to bilateral agreements, which are a key aspect of today’s air transport. Without designation, a carrier cannot be granted any international traffic rights. This has largely precluded the rise of trans-national carriers to date, and will continue to do so as long as the principles of the Convention are interpreted to the letter.

However, it is increasingly being suggested that this situation could soon change. With the exception of the USA and the EU, more and more countries are coming to realise that in order to count on a competing carrier, partial or full privatisation remains the only viable option. But government tenders offering shares worth several hundred million Euros will not happen as long as the Chicago Convention continues to prevail, as potential investors might be put off by the relatively stringent conditions attached to the deal, and by the fact that investors would need to hold the same citizenship as the airline if they don’t want to lose valuable traffic rights.

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Although signs of change remain timid at the moment, the examples of Canada and Australia in allowing foreign ownership and control of their domestic carriers, will gradually lead to a more general application of the new rule, which will also be valid for their “international” carriers (Air Canada and Qantas respectively). The fact that IATA’s so-called “Agenda for Freedom”⁶ which was presented in Istanbul in 2008, has attracted an important amount of sympathy, suggests that the industry is seriously considering alternatives to the restrictions imposed more than 60 years ago.

Towards a new global air transport order

The EC should play a crucial role by fostering a new global air transport Convention, first through the establishment of Open Aviation Areas with selected, like-minded countries, and then through a reinforcement of the role of recognised international platforms (ICAO, WTO, etc.). This would allow aviation to get eventually rid of its nationality clause and finally to be considered as a ‘mature’ industry to be treated on a par with others. This would promote the establishment of more powerful and solid trans-national entities which could better respond to an ever-evolving demand. WTO has already considered this possibility, through its General Agreement on Trade in Services (GATS) and, although it was to date never transposed to air transport since its inception in 1995 notwithstanding the possibility to do so in three areas (i.e. aircraft repair and maintenance, selling and marketing of air transport services, and computer reservations systems), it provides an interesting possibility for this list to be expanded in the future and to bring the principle of the Most Favoured Nations (MFN) into equation. Some believe however that the MFN clause was the main reason for the present stalemate.

Safety agencies would see a shift of their role from the identification and definition of safety standards to an implementation role. They would need to be headed by a supra-national entity in charge of the definition of safety standards that would be applied and enforced by local agencies, so that trans-national air carriers could not escape their safety responsibilities or decide to transfer their citizenship to areas where safety obligations are less stringent.

⁶ IATA, “Agenda for Freedom”, Istanbul, 25-26 October 2008.